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CATALOGUE

OF THE

BIRDS

IN THE

BRITISH MUSEUM.

VOLUME XII.

LONDON:
PRINTED BY ORDER OF THE TRUSTEES.
1888.

CATALOGUE

OF THE

PASSERIFORMES,

OR

PERCHING BIRDS,

IN THE

COLLECTION

OF THE

BRITISH MUSEUM.

FRINGILLIFORMES: Part III.

CONTAINING THE FAMILY

FRINGILLIDÆ.

BY

R. BOWDLER SHARPE.

LONDON:
PRINTED BY ORDER OF THE TRUSTEES.
1888.

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PREFACE.

With the remarkable increase of the collection of Birds this volume of the 'Catalogue' has assumed a bulkier shape than any of its predecessors. In fact, since the commencement of the work in 1874 the collection has been nearly trebled, so that the species described in the present volume are represented on an average by a series of about seventeen examples each.

In the Preface to Volume X. it was my pleasing duty to place on record the acquisition of two most important collections of South-American Birds. These accessions were quickly followed by the equally valuable gifts of two celebrated collections of Birds of the Old World—both formed by ornithologists who thoroughly understood the requirements of modern Ornithology as to the methods and principles of collecting.

The first of these donations is the collection formed by Allan O. Hume, Esq., C.B., beyond comparison the most extensive, complete, and important that has ever been formed of the birds of the British Asiatic Empire. Beside the specimens obtained by the donor himself and the collectors employed by him, this collection embraces the Mandelli collection from Sikkim and Tibet, Brooks' North-Western and Central-Indian Birds, Bingham's collection from Delhi and Tenasserim, Scully's collection from Turkestan, and others. It consists of 63,000 bird-skins, 18,500 eggs, and 500 nests. Many of the species, the number of which has been computed at 2000, are represented by long series very completely illustrating their geographical distribution and variation according to age, season, or locality.

The second collection is that formed by the late Marquess of Tweeddale and bequeathed by him to Capt. R. G. Wardlaw Ramsay, who has now deposited it in the British Museum. The value of this collection for the British Museum consists chiefly of the Birds obtained in countries of Asia beyond the limits of the British Empire; it thus supplements in most important points the Hume collection, and it is calculated that, after the elimination of duplicates, some 25,000 specimens will be added to the British Museum.

The removal of the Natural History Department into a new and more commodious building has no doubt had much to do with the almost simultaneous accession of collections for the reception of which there would not have been room in the old building. But the chief causes by which the donors of these magnificent collections were moved to deposit them in the National Museum are to be sought in the scrupulous care bestowed on the preservation of the specimens as well as in the rigorous adherence by the Trustees to the principle of rendering them subservient to scientific use as far as this is compatible with safe custody.

I believe a 'Catalogue' like the present to be the best instrument for attaining this latter object. It renders necessary a thorough examination of the specimens, and communicates the results of such examination to students in every part of the Globe; whilst by the carefully compiled lists of the specimens their orderly arrangement is secured, and their existence in the Museum permanently placed on record, so that the loss of any of them could not fail to be discovered. Ornithologists will therefore learn with great satisfaction that H.M. Treasury has recently sanctioned proposals by which the progress of this work will be much accelerated.

ALBERT GÜNTHER.

Zoological Department,
6 Jan., 1888.

INTRODUCTION.

The number of specimens of *Fringillidæ* recorded in the present volume is 9443, exceeding by several thousands the contents of any previous volume of the 'Catalogue of Birds.' The number of species recorded is 559, of which only 30 are unrepresented in the Museum collection, which contains likewise the types of no less than 125 species.

The line of demarcation between the families *Fringillidæ* and *Tanagridæ* seems to be an extremely arbitrary one, and many genera included by me as Finches are just as likely to be Tanagers, if there is really a definable character for the separation of the two families. I allude more especially to such forms as *Piezorhina*, *Chamæospiza*, *Coryphospingus*, &c. Some distinctive characters may ultimately be discovered in the anatomy of the *Fringillidæ* and *Tanagridæ* which will serve to separate them; but at present the whole classification of these birds is highly unsatisfactory.

Equally difficult is it to arrive at a satisfactory conclusion with regard to the value of the various subspecies and varietal forms found in North America. It is probable that these can only be properly studied in American museums, although, thanks to the liberal donations of the United States National Museum, Mr. G. B. Sennett, Mr. H. K. Coale, and other correspondents, I have had a better series of North-American birds at my disposal than has ever been my lot before. Some of the races recognized by the American Ornithologists' Union in their authoritative 'Check-list' I have been able clearly to recognize. In other cases the series of skins has been sufficient to show an absolute connection between several forms of Nearctic Finches; whilst some of the differences put forward by American ornithologists appear to me to be insufficient to recognize many of their subspecies. When the British Museum possesses a

series of North-American skins of equal extent to the Hume Collection of Indian Birds, then I shall be able to speak with more confidence on the relations of Nearctic species.

The value of the recent donations of their great collections by Mr. Allan Hume, Capt. Wardlaw Ramsay, and Messrs. O. Salvin and F. Du Cane Godman is amply illustrated in the following pages, and needs no words of mine to enhance it.

The Museum has recently received some very important gifts from other quarters, which have been of the utmost assistance in the preparation of this volume of the 'Catalogue.' Amongst these may be mentioned the following:—

A collection from Lado and the Monbuttu country in Equatorial Africa, presented by Emin Pasha. This collection added several species to the British Museum; but they unfortunately arrived too late to be incorporated in the body of the work, and are included in the Appendix.

Many interesting species of Finches and Buntings from various parts of the Russian Empire, received in exchange from the Imperial Museum of St. Petersburg.

The collection of *Fringillidæ* formed by the late Mr. W. A. Forbes, and bequeathed by him to the British Museum.

I likewise desire to express my sincere thanks to the following gentlemen who have materially assisted me in the preparation of the present volume either by the loan or donation of specimens to the Museum:—Capt. Bingham, W. Davison, Esq., Prof. Giglioli, E. Hargitt, Esq., J. F. Jackson, Esq., G. Frean Morcom, Esq., Capt. Stackhouse Pinwill, Henry Seebohm, Esq., Captain Shelley, Colonel Swinhoe, and Canon Tristram.

The same symbols are employed as have been customary in previous volumes of the 'Catalogue.' "[P.]" means "Presented by;" "[C.]"="Collected by;" "[E.]"="Received in Exchange."

R. BOWDLER SHARPE.

Dec. 10, 1887.

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a. Passeres normales (continued).

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CATALOGUE

OF

BIRDS.

Order II. PASSERIFORMES

(Cat. B. vol. iii. p. 1).

Suborder I. PASSERES

(Cat. B. vol. iii. p. 6).

Section B. *FRINGILLIFORMES*

(NINE-QUILLED PASSERES)

(*Cf.* Cat. B. vol. x. pp. 1, 2).

Family FRINGILLIDÆ.

The present volume of the Catalogue treats of the *Fringillidæ*, a family closely allied to the *Tanagridæ*, described by Dr. Sclater in the preceding volume, and also connected through the Buntings with the Larks (*Alaudidæ*).

No one has as yet propounded a satisfactory classification of the *Fringillidæ*, the difficulty consisting in the complete connection which exists between the various genera of Finches and Buntings; and such ornithologists only who have not entered into a detailed study of this family will speak of the Finches, Buntings, and their allies as if they constituted well-defined families. Any one who has worked upon a large or small fragment of the family must acknowledge that the definition of the genera is difficult and the recognition of subfamilies almost impossible. The *Fringillidæ* naturally group themselves into three divisions—Grosbeaks, Finches, and Buntings; but numerous forms connect them, being referable to the confines of any of the three groups. Thus *Cardinalis* will probably be found from its osteology to be a

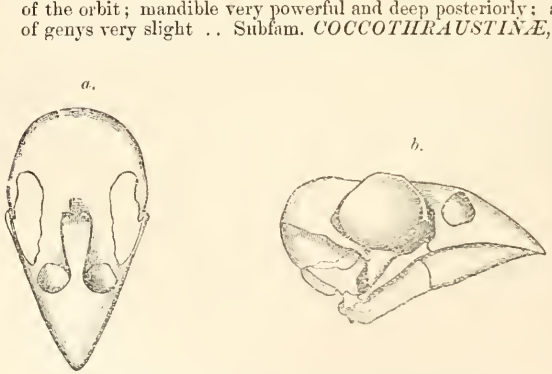
Bunting with the aspect of a Grosbeak; while *Urocynchramus* is certainly a Bunting with the aspect of a Rose-Finch, or, if it be preferred, a Rose-Finch with the bill of a Bunting.

Every division of the family is therefore to be accepted on the score of convenience rather than as having a foundation of solid structural characters; and it would not be unreasonable to treat the whole family as constituting one great genus *Fringilla*, with various sections or subgenera, as was once done for the family *Picidæ* by the late Professor Sundevall.

It is quite possible that when all the genera have been osteologically and anatomically examined, additional generic characters may be discovered; but even then little confidence can be felt in the classification of the family, unless every single type of Finch has been examined; for, so far as my experience goes, every Fringilline form at present known is closely connected with some other form, which in turn leads on through a perfectly complete gradation to the most distant genus of the family. The series of skeletons in the Museum is not sufficient for a comparison of the osteology of all the genera of Finches; and therefore it has been impossible for me to attempt a classification from these characters alone. Nevertheless one can recognize three apparently well-defined types, which, for convenience' sake, I shall regard as subfamilies, but with a caution to the student that, however different a Hawfinch, a Chaffinch, and a Bunting may look at first sight as centres of large groups of Finches, there is no difficulty in discovering the links which join them all together in one series.

The following are the characters which, though slight, appear to me to be fairly typical of the main divisions alluded to above:—

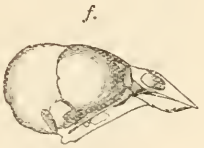
a. Nasal bones (see fig.) produced backwards beyond the anterior line of the orbit; mandible very powerful and deep posteriorly; angle of genys very slight .. Subfam. *COCCOTHRAUSTINÆ*, p. 3.



a. Skull of *Coccothraustes coccothraustes*, from above.
b. Skull of *Coccothraustes coccothraustes*, lateral view.

b. Nasal bones not produced beyond the anterior line of the orbit.
a'. Cutting-edges of mandibles conterminous or nearly so; mandibular angle at the chin very slightly indicated.
Subfam. *FRINGILLINÆ*, p. 170.
b'. Cutting-edges of the mandibles not conterminous, leaving a gap in the outline of the closed bill; mandibular angle at chin very acute ..... Subfam. *EMBERIZINÆ*, p. 468.

c. Skull of *Fringilla cælebs*, from above.
d. Skull of *Fringilla cælebs*, lateral view.



e. Skull of *Emberiza citrinella*, from above.
f. Skull of *Emberiza citrinella*, lateral view.

Subfamily I. COCCOTHRAUSTINÆ.

A general stoutness of bill is the leading characteristic of the Grosbeaks, accompanied, as we see in the skull (*antea*, p. 2), by an immense development of the thickness of the posterior end of the lower jaw; but that this character will be found to run through all the genera which I have arranged in this subfamily is extremely doubtful. As before stated, I have been able to examine so few skeletons, that the present arrangement represents rather a general idea than an actual classification of the Grosbeaks, and is liable to future modifications.

Phonipara and *Volatinia* are probably Buntings, and *Cardinalis* certainly from the skull alone (see fig. on p. 160) seems very Bunting-like. It is doubtful whether *Pyrrhuloxia* is rightly placed, and it may be found ultimately to be nearer the Bullfinches.

Key to the Genera.

a. Tail short, equalled or exceeded by the outstretched feet. [*Geospizæ.*]

a'. Bill very stout and thick, the culmen much less than the tarsus in length.

a''. Bill massive, but gently icurved, the direction of the curve n both culmen and genys about equal; the depth of the mandible greater than that of the maxilla, measured at the nostrils ..... 1. GEOSPIZA, p. 6.

b''. Bill strongly curved, the direction of the curve of the culmen arched, and not so straight as the line of the genys; the depth of the mandible equal to that of the maxilla, measured at the nostrils ..... 2. CAMARHYNCHUS, [p. 14.

b'. Bill long and slender, the culmen about equal to the tarsus in length ..... 3. CACTORNIS, p. 18.

b. Tail long, far exceeding the outstretched feet. [*Coccothraustæ.*]

c'. Tail square, or only slightly forked.

c''. Cutting-edge of maxilla nearly straight; no tooth in the posterior half of the maxilla.

a'''. Inner primaries and outer secondaries ordinary, not quadrated.

*a*⁴. Wings much shorter, falling short of the tail by more than the length of the tarsus.

*a*⁵. Bill moderately stout and rather acute; the distance between the nasal apertures about equal to the depth of the mandible ..... 4. CHLORIS, p. 21.

*b*⁵. Bill very stout and massive, the distance between the nasal apertures much greater than the depth of the mandible ..... 5. EOPHONA, p. 28.

*c*⁵. Bill enormous, the distance between the nasal apertures less than the depth of the mandible ..... 6. CHAUNOPROCTUS, [p. 31.

*b*⁴. Wings very long, and falling short of the tail by less than the length of the tarsus ..... 7. HESPERIPHONA, [p. 32.

b'''. Inner primaries and outer secondaries with quadrated ends .... 8. COCCOTHRAUSTES, [p. 36.

d''. Cutting-edge of mandible with a distinct tooth behind the line of the nostrils.

c'''. Chin-angle nearly square.

*c*⁴. Tail short, falling short of the length of the wing by much more than the length of the tarsus ..... 9. MYCEROBAS, p. 41.

d^4. Tail longer, the difference between its length and that of the wing not exceeding the length of the tarsus ..... 10. PYCNORHAMPHUS, [p. 43.

d'''. Chin-angle rounded.

e^4. Wing rounded, the secondaries falling short of the primaries by less than the length of the tarsus; secondaries rounded at the ends ..... 11. PHEUCTICUS, p. 50.

f^4. Wing more pointed, the secondaries falling short of the primaries by more than the length of the tarsus; secondaries squared at the ends..... 12. HEDYMELES, p. 58.

d^5. Tail quadrated, generally rounded.

e''. Without a long crest.

e'''. Bill short and massive, the culmen exceeding the length of the tarsus ..... 13. GUIRACA, p. 65.

f'''. Bill of varying strength and massiveness; the culmen always less than the length of the tarsus.

g^4. Bill swollen and rounded; the upper mandible overlapping the under one at the tip.

d^5. Bill very stout and rounded, the space between the nasal orifices equal to the length of the genys..... 14. ORYZOBORUS, p. 76.

e^5. Bill smaller, the space between the nasal orifices less than the length of the genys.

a^6. Depth of lower mandible equal to the depth of the maxilla.

a^7. Bill much less curved, the breadth across the gape much less than the depth of the bill ..... 15. LOXIGILLA, p. 82.

b^7. Bill very much curved, the breadth across the gape equal to the depth of the bill ..... 16. NEORHYNCHUS, [p. 87.

b^6. Depth of lower mandible less than the depth of the maxilla.

c^7. Tail shorter than the wing

a^8. Nostrils exposed in front of the nasal plumes; upper mandible with the tomium festooned near the tip..... PIEZORHINA, p. 89.

b^8. Nostrils nearly hidden by nasal plumes, no festoon on the tomium of mandible..... 17. SPERMOPHILA, p. 90.

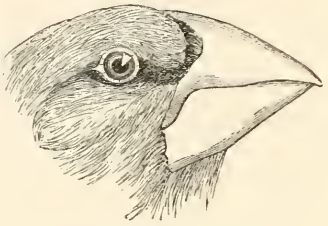
d^7. Tail equal to the wing.. 18. CATAMBLYRHYNCHUS, [p. 142.

h^4. Bill more pointed and Bunting-like, the upper and lower mandibles meeting at the tip.
f^5. Middle toe and claw very long, and equal in length to the tarsus ..... 19. Phonipara, p. 143.
g^5. Middle toe and claw less than the tarsus.
c^6. Plumage glossy black .... 20. Volatinia, p. 152.
d^6. Plumage iron-grey without gloss ..... 21. Amaurospiza, p. 156.
f''. With a long crest.
g'''. Bill swollen and curved, with a notch in the cutting-edge of the maxilla in advance of the line of the nostril ..... 22. Pyrrhuloxia, p. 158.
h'''. Bill pointed, and with no notch on the maxilla ..... 23. Cardinalis, p. 160.

Section α. Ground-Finches.

1. GEOSPIZA.

Type.
Geospiza, *Gould, P. Z. S.* 1837, p. 5 ..... G. magnirostris.



Head of *Geospiza magnirostris.*

Range. Confined to the Galapagos Islands.

No "key to the species" of this genus can be drawn up, as there is no difference between them, except that of size, and the way in which one form graduates into another is shown by Mr. Salvin in his illustration of the heads of this species (Trans. Zool. Soc. ix. p. 484).

I must confess that I am not entirely satisfied with regard to the changes of plumage in the Galapagos Finches, nor do I believe that these will be properly understood until some naturalist resides on the islands for at least a year, discovers the breeding-haunts of the various species, and traces the development of the plumage from the nestling to the adult stage. My own belief is that there is a distinct winter or cold-weather (? rainy season) plumage, and that with the seasonal plumage the colour of the bill changes. This would correspond with the changes undergone by other Grosbeaks and Finches.

Dr. Habel writes as follows (Trans. Zool. Soc. ix. p. 478):—"The

colouring of all the species of this genus exhibits three styles—a black, a brown, and a grey. This is the case both in male and female birds, except that the plumage of the females is of a dirty brownish colour, whereas in the males it is black. It would seem reasonable to divide each species into three varieties, as besides the plumage the colour of the feet, as well as of the beaks, is different in these three varieties. The colour of the feet varies from a light grey to black, and that of the beak from yellow to brownish black."

Mr. Salvin's opinion is as follows (*l. c.* p. 478):—"The different states of plumage, on which Dr. Habel remarks, are to be attributed to the different ages of individuals. The younger birds are the lightest-coloured and present the most mottled appearance; as they get older they become darker, until at last in old males the plumage is almost uniform black. The colour of the bill appears to vary irrespective of age, as some black birds have light-coloured bills, though in the majority of birds in this dress it is black. Younger mottled birds have light-coloured bills, but in old females, just as in the males, the bill is usually black."

1. Geospiza magnirostris.

Geospiza magnirostris, *Gould*, *P. Z. S.* 1837, p. 5; *Darwin*, *Voy.* '*Beagle*,' *Birds*, p. 100, pl. xxxvi. (1841); *Gray*, *Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 542 (1850); *Gray*, *Hand-l. B.* ii. p. 88, no. 7297 (1870); *Scl. et Salv. Nomencl. Av. Neotr.* p. 27 (1873) *Salvin*, *Trans. Zool. Soc.* ix. p. 479 (1876).

Adult male. Entirely black above and below; quills and tail-feathers blackish brown; under tail-coverts black, broadly edged and tipped with white. Total length 5·2 inches, culmen 1, wing 3·55, tail 2·1, tarsus 1.

In what I take to be the *seasonal plumage* a browner shade pervades the black, the feathers having edges of obscure brown; these pale edges are lighter and more conspicuous on the abdomen; under tail-coverts white with black bases.

Adult female. Different from the male; general colour above brown, the feathers edged with ashy olive, especially on the rump and upper tail-coverts; wing-coverts like the back, edged with pale ashy, the greater coverts whiter on the margins; bastard-wing, primary-coverts, and quills dark brown, edged with pale ashy, clearer whity brown on the margins of the primaries; tail-feathers pale brown, with ashy-brown margins; crown of head rather darker than the back, blackish, with slightly indicated pale edges to the feathers; lores, sides of face, and ear-coverts ashy olive-brown, darker brown along the upper edge of the latter; cheeks a little darker brown; throat dark brown, streaked with ashy margins to the feathers; remainder of under surface whity brown with a slight olive tinge, the fore neck and chest streaked with dark-brown centres to the feathers; the sides of body and flanks brown, also streaked with darker brown; thighs and under tail-coverts, under wing-coverts, and axillaries whity brown, slightly tinged with olive;

quills below dusky brown, ashy white along the inner edge. Total length 6 inches, culmen 1, wing 3·35, tail 2, tarsus 1.

None of the seven specimens in the Museum have the sexes or dates of capture marked, but the brown birds, which I take to be all females, have shorter wings than the black males. In the latter the length of wing is 3·55–3·7 inches, and in the females 3·25–3·45. The bill in the females varies in colour, probably with season, becoming much blacker, and the increase in colour of the bill is accompanied by a blacker tone of plumage, the upper surface having the ashy margins less pronounced, while the under surface of the body is thickly mottled with black spots.

Mr. Salvin has "little doubt that a large series of the skins of this bird would show that the dimensions of the species graduate into those of *G. strenua*."

Hab. Chatham and Charles Islands, Galapagos.

a, b. ♂ ♀ ad. sk.	Chatham Island (*C. Darwin*).	Zoological Society [P.]. (Types of species.)
c, d. ♂ ad. sk.	Galapagos (*C. Darwin*).	Salvin-Godman Coll.
e. ♂; *f, g.* ♀ ad. sk.	Galapagos.	Sir W. Burnett and Admiral Fitzroy [P.].

2. Geospiza strenua.

Geospiza strenua, *Gould, P. Z. S.* 1837, p. 5; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 100, pl. xxxvii. (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 542 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 323; *Gray, Hand-l. B.* ii. p. 88, no. 7298 (1870); *Sundev. P. Z. S.* 1871, p. 124; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Salv. Trans. Z. S.* ix. p. 480 (1876).

Adult male (type of species). Similar to *G. magnirostris*, but smaller: "bill brown or black or yellowish brown; tarsus black or grey, the underpart of the foot light brown or light grey; iris brown or dark brown" (*Dr. A. Habel*). Total length 5·75 inches, culmen 0·85, wing 3·15, tail 1·9, tarsus 1.

An adult male from Indefatigable Island has the wing 3·05 inches, tarsus 0·95.

Adult males from Abingdon Island measure:—Wing 3·2–3·3 inches, tarsus 0·95–1.

Adult males from Bindloe Island measure:—Wing 3·2–3·3 inches, tarsus 0·9–1.

Adult female. Differs from the female of *G. magnirostris* only in size. Total length 4·7 inches, culmen 0·8, wing 2·9, tail 1·7, tarsus 0·9.

The female bird from Abingdon Island has the wing 3·1 inches and the tarsus 1. Those from Bindloe Island measure:—Wing 2·9–3·2 inches, tarsus 0·9–0·95.

Immature males resemble the old females, but have rather darker mottling of the black centres to the throat- and breast-feathers and have the bill yellowish below (in skin).

A young male from Abingdon Island has the wing 3·2 inches, the tarsus 1; and a series from Bindloe Island measure:—Wing 2·9–3·25, tarsus 0·9–1.

Dr. Habel collected on Bindloe Island from the 2nd to the 16th of November, 1868, and the birds were apparently in full plumage, as in most of the males the bill is black, in one case entirely so. Those that have the lower mandible more or less yellow have also evident traces of ashy-olive margins to the feathers. These may be young birds of the previous year, if these light edges be not remains of winter plumage. We have no proof that these birds vary with the season, and it is possible that the brown edgings to the feathers are a sign of immaturity only, in which case it is evident that the pure black plumage is not gained for at least a year or two.

Quite a young bird, apparently a female, has the bill entirely reddish horn-colour with yellow on the under mandible; it is also very small, and has been figured by Mr. Salvin (*l. c.*).

The very old birds show an inclination to develop a culminal ridge.

Hab. Chatham, James, Indefatigable, Abingdon, and Bindloe Islands, Galapagos.

a. ♂ ad.; *b,c*. ♀ ad. sk.	Chatham Island (*C. Darwin*).	Zoological Society [P.]. (Types of species.)
d. ♂ ad. sk.	Indefatigable Island, Sept. 24, 1868 (*A. Habel*).	Salvin-Godman Coll.
e,f,g. ♂; *h*. ♀ ad. sk.	Abingdon Island (*A. Habel*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Abingdon Island (*A. Habel*).	Sclater Coll.
k. ♂ imm. sk.	Abingdon Island.	Dr. A. Habel [C.].
l, m, n. ♂ ad.; *o*. ♀ ad.; *p, q*. ♂ imm. sk.	Bindloe Island, Nov. 1868.	Dr. A. Habel [C.].
r, s, t, u. ♂ ad.; *v, w*. ♀ ad.; *x, y*. ♀ imm. sk.	Bindloe Island, Nov. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.
z. ♂ imm. sk.	Bindloe Island, Nov. 1868 (*Dr. A. Habel*).	Sclater Coll.
a'. ♂ ad. sk.	Galapagos Archipelago.	Sir W. Burnett and Admiral Fitzroy [P.].

3. Geospiza dubia.

Geospiza dubia, *Gould, P. Z. S.* 1837, p. 6; *Darwin, Zool. Voy. 'Beagle,' Birds,* p. 103 (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 543 (1850); *Gray, Hand-l. B.* ii. p. 88, no. 7304 (1870); *Salvin, Trans. Z. S.* ix. p. 480 (1876).

Female. Top of head and upper surface of body dusky, each feather margined with ashy olive; a superciliary streak, cheeks, throat, and lower surface of body ashy olive, each feather with a central dusky mark; wings and tail brown, each feather margined with olive-ashy; bill dull white; feet dull dusky brown. Total length

$3\frac{3}{8}$ inches, wing $2\frac{3}{4}$, tail $1\frac{5}{8}$, tarsus $\frac{7}{8}$, bill $\frac{5}{8}$, height of bill $\frac{3}{8}$. (*Gould.*)

Hab. Chatham Island, Galapagos.

I have carefully examined all our series of *Geospizæ* in the hope of finding the type of this species, which is undoubtedly missing from the collection. As the name appears *in small print* in Gray's 'Hand-list,' it is evident that he considered it to be wanting in 1870, and it is doubtful if it was ever received from the Zoological Society. It is much to be regretted that the types of several birds were not transferred from the old Museum of the Society to the British Museum; a part of the 'Beagle' collection was undoubtedly retained by Mr. Gould, from whom the specimens passed into the possession of other naturalists. Some fell into the hands of Messrs. Salvin and Godman, by whose munificence they have once more become national property.

4. Geospiza fortis.

Geospiza fortis, *Gould, P. Z. S.* 1837, p. 5; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 101, pl. xxxviii. (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 543 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 323; *Gray, Hand-l. B.* ii. p. 88, no. 7299 (1870); *Sundev. P. Z. S.* 1871, p. 124; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Salvin, Trans. Z. S.* ix. p. 481 (1876).

Adult male. Similar to *G. strenua*, but much smaller. Total length 5 inches, culmen 0·65, wing 3, tail 1·65, tarsus 0·85.

Adult female. Similar to the female of *G. strenua*, but smaller. Total length 5 inches, culmen 0·75, wing 3, tail 1·75, tarsus 0·85.

The descriptions are from a pair of birds from Indefatigable Island in the Salvin-Godman collection. Young males seem to resemble the old females, but to be darker, with blacker mottlings below. Immature birds of both sexes have the edges of the wing-coverts sandy buff.

Adult males from Indefatigable Island have the wing 2·7–3 inches, and the tarsus 0·8–0·85.

Adult females from the same island have the wing 2·7–3 inches, the tarsus 0·8–0·85.

Young males measure:—Wing 2·65–2·8 inches, tarsus 0·8–0·85.

Two males, not quite adult, from Abingdon Island, measure:—Wing 2·5–2·55 inches, tarsus 0·75–0·8.

Adult males from Bindloe Island measure:—Wing 2·55–2·7 inches, tarsus 0·75–0·8.

Adult females from Bindloe Island measure:—Wing 2·5–2·55 inches, tarsus 0·75.

Young males from Bindloe Island measure:—Wing 2·5–2·55 inches, tarsus 0·75.

The birds from Bindloe Island are decidedly smaller than those from Indefatigable Island, and have somewhat smaller bills than the average of the individuals from the last-named island. The present species is, however, very variable in size of bill, and some specimens

show a distinct approach to the dimensions of *G. strenua*, which, being found on the same islands, not improbably interbreeds with it.

Hab. Chatham, James, Charles, Indefatigable, Abingdon, and Bindloe Islands, Galapagos.

a. ♀ ad. sk.	Charles Island (*C. Darwin*).	Zoological Society [P.]. (Type of species.)
b. ♀ ad. sk.	Galapagos Islands.	Capt. Kellett and Lieut. Wood [P.].
c, d. ♂ ♀ imm. sk.	Abingdon Island, Dec. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.
e, f. ♂ ad.; *g.* ♀ ad. sk.	Indefatigable Island, Sept. 1868.	Dr. A. Habel [C.].
h. ♂ imm. sk.	Indefatigable Island, Sept. 1868 (*Dr. A. Habel*).	Sclater Coll.
i, k, l, m. ♂ ad.; *n, o.* ♀ ad.; *p, q.* ♂ imm. sk.	Indefatigable Island, Sept. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.
r, s. ♂ ad.; *t, u.* ♀ ad.; *v, w.* ♂ ♂ imm. sk.	Bindloe Island, Nov. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.
x. ♂ ad. st.	Galapagos (*Dr. A. Habel*).	Sclater Coll.

5. Geospiza nebulosa.

Geospiza nebulosa, *Gould, P. Z. S.* 1837, p. 5; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 101 (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 543 (1850); *Gray, Hand-l. B.* ii. p. 88, no. 7300 (1870); *Sundev. P. Z. S.* 1871, p. 125; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Salvin, Trans. Z. S.* ix. p. 482 (1876).

Adult female (type of species). Similar to the female of *G. fortis*. Total length 4·8 inches, culmen 0·65, wing 2·9, tail 1·6, tarsus 0·95.

Mr. Salvin doubts if this is really distinct from *G. fortis*, and it is quite possible that connecting-links between the two species will ultimately be discovered.

Hab. Chatham and Charles Islands, Galapagos.

a. ♀ ad. sk.	Chatham Island (*C. Darwin*).	Zoological Society [P.]. (Type of species).

6. Geospiza dentirostris.

Geospiza dentirostris, *Gould, P. Z. S.* 1837, p. 6; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 102 (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 543 (1850); *Gray, Hand-l. B.* ii. p. 88, no. 7302 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Salvin, Trans. Z. S.* ix. p. 482 (1876, pt.).

Geospiza fortis, *Salvin, P. Z. S.* 1883, p. 421 (pt.).

Adult male. Similar to the male of *G. fortis*, but with a differently shaped bill, bowed in towards the end of the upper mandible, and slightly toothed on its cutting-edge. Total length 4·5 inches, culmen 0·55, wing 2·65, tail 1·45, tarsus 0·75.

Adult female (type of species). Similar to the female of *G. fortis*,

but differing in the form of the bill. Total length 4·9 inches, culmen 0·6, wing 2·65, tail 1·55, tarsus 0·75.

Hab. Charles Island, Galapagos; ? Chatham Island.

a. ♀ ad. sk.	Galapagos Archipelago (*C. Darwin*).	Zoological Society.
b. ♂ ad. sk.	Charles Island, Feb. 1880 (*A. H. Markham*).	Salvin-Godman Coll

7. Geospiza difficilis.

Geospiza dentirostris (*nec Gould*), *Scl. & Salv. P. Z. S.* 1870, p. 323; *Salvin, Trans. Z. S.* ix. p. 482 (1876, pt.).
Geospiza fortis, *Salvin, P. Z. S.* 1883, p. 421 (pt.).

Adult male. Similar to *G. fortis*, but much smaller and with a more pointed bill. Total length 4·1 inches, culmen 0·55, wing 1·45, tail 1·35, tarsus 0·8.

Adult female. Similar to the female of *G. fortis*, but very much darker and more uniform brown above, and more thickly mottled below. Total length 3·8 inches, culmen 0·55, wing 2·4, tail 1·3, tarsus 0·75.

In the adult males the wing measures 2·45–2·5 inches, and the tarsus from 0·75–0·8. An immature male has the wing 2·35, and the tarsus 0·75.

Dr. Habel's specimens were collected in the month of December and Captain Markham's in February, and in the whole series the bill is entirely black. The bill, moreover, is not the same shape as in the thick-billed *Geospizæ*, and were it not for the absolute gradation in form from *G. magnirostris* downwards, it is doubtful whether *G. dentirostris* and its allies ought to be placed in the same genus as the thick-billed *Geospizæ*.

The present species was referred by Mr. Salvin to *G. dentirostris*, but the smaller size and the differently shaped bill induce me to believe that the two birds are distinct.

Hab. Abingdon and Charles Islands, Galapagos.

a. Imm. sk.	Galapagos Islands (*C. Darwin*).	Zoological Society [s. n. *S. strenua*].
b, *c*. ♂ ♀ ad.; *d*. ♂ imm. sk.	Abingdon Island, Dec. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Abingdon Island, Dec.	Dr. A. Habel.
f, *g* [♂] ad. sk.	Charles Island (*A. H. Markham*).	Dr. A. Habel.

8. Geospiza fuliginosa.

Geospiza fuliginosa, *Gould, P. Z. S.* 1837, p. 5; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 101 (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 543 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 323; *Gray, Hand-l. B.* ii. p. 88, no. 7301 (1870); *Sundev. P. Z. S.* 1871, p. 125; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Salvin, Trans. Z. S.* ix. p. 482 (1876); *Sharpe, P. Z. S.* 1877, p. 66.

Adult male. Similar to *G. fortis*, but much smaller, and having

the vent and under tail-coverts black, the latter only tipped with white. Total length 4·1 inches, culmen 0·5, wing 2·5, tail 1·5, tarsus 0·75.

Adult female. Resembles the female of *G. fortis*, but is much smaller. Total length 3·9 inches, culmen 0·5, wing 2·4, tail 1·25, tarsus 0·75.

Adult males (types) from Chatham Island have the wing 2·5 inches, the tarsus 0·8.

A female from the same place has the wing 2·4 inches, the tarsus 0·75.

Adult males from Indefatigable Island measure:—Wing 2·5–2·6 inches, tarsus 0·75–0·8.

Adult females from Indefatigable Island measure:—Wing 2·4–2·45 inches, tarsus 0·7–0·75.

Young males from Indefatigable Island measure:—Wing 2·35–2·45 inches, tarsus 0·75.

Hab. Chatham, James, Albemarle, and Indefatigable Islands, Galapagos.

a. ♂ ad. sk.	Chatham Island (*C. Darwin*).	Geological Society. (Type of species.)
b. ♂ ad. sk.	Chatham Island (*C. Darwin*)	J. Gould, Esq.
c. ♀ ad. sk.	Chatham Island (*C. Darwin*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. st.	James Island.	Sir W. Burnett and Admiral Fitzroy [P.].
f, g, h. Juv. sk.	Albemarle Island.	Commander Cookson [P.].
i, k. ♂ ad. sk.	Indefatigable Island.	Dr. A. Habel [C.].
l, m. ♂ ♀ jun. sk.	Indefatigable Island.	Dr. A. Habel [C.].
n, o. ♂ ad.; *p.* ♀ ad.; *q, r.* ♂ ♀ jun. sk.	Indefatigable Island (*Dr. A. Habel*).	Salvin-Godman Coll.

9. Geospiza parvula.

Geospiza parvula, *Gould, P. Z. S.* 1837, p. 6; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 102, pl. xxix. (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 543 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 323; *Gray, Hand-l. B.* ii. p. 88, no. 7303 (1870); *Sundev. P. Z. S.* 1871, p. 125; *Scl. et Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Salvin, Trans. Z. S.* ix. p. 483 (1876); *id. Cat. Strickl. Coll.* p. 219 (1882).

Adult male. Similar to *G. fuliginosa*, but smaller. Total length 3·9 inches, culmen 0·45, wing 2·35, tail 1·4, tarsus 0·7.

Adult female. Similar to the same sex of *G. fuliginosa*, but smaller. Total length 3·7 inches, culmen 0·5, wing 2·35, tail 1·3, tarsus 0·65.

Young males resemble the adult females, but are rather more thickly mottled with brown underneath.

The very young birds of both sexes are nearly uniform whity brown underneath, with pale rufous-brown edgings to the wing-coverts.

The type specimen would seem to be immature, as it has the uniform breast and abdomen of a young bird, but is black above and has a black throat and chest. This is not the plumage of the young male, as determined by Dr. Habel; and it is by no means improbable that the birds from Chatham Island, the true *G. parvula*, are a distinct species from the entirely black males of Abingdon and Bindloe Islands. In fact, even with the large series in the British Museum, it is impossible to trace the plumages of this or any other species of *Geospiza*, as all the specimens have been collected at the same season of the year. Thus, along with entirely black individuals from Bindloe Island, with black bills, there occur other black males with reddish bills and grey edgings to the feathers. In any other group of Finches these characters would be sufficient to account for the summer and winter plumage of the species; but in the Galapagos Finches the grey margins seem to be a sign of immaturity.

The male (type) from Chatham Island has the wing 2·4 inches, the tarsus 0·75.

Two females have the wing 2·35 inches, the tarsus 0·7.

The males from Abingdon Island have the wing 2·25–2·35 inches, and the tarsus 0·65–0·7.

The females measure:—Wing 2·3–2·35 inches, tarsus 0·65–0·7.

The young males measure:—Wing 2·2–2·3 inches, tarsus 0·65–0·75.

The adult males from Bindloe Island measure:—Wing 2·35–2·4 inches, tarsus 0·65–0·7.

The females measure:—Wing 2·15–2·2 inches, tarsus 0·6–0·65.

Young males measure:—Wing 2·3–2·35 inches, tarsus 0·7.

Hab. Chatham, James, Abingdon, and Bindloe Islands, Galapagos.

a. ♂; *b*. ♀ ad. sk.	Chatham Island (*C. Darwin*).	Zoological Society. (Types of species.)
c. ♀ ad. sk.	[James Island.]	Sir W. Burnett and Admiral Fitzroy.
d, *e*. ♂ ad.; *f*. ♀ ad. sk.	Abingdon Island, Dec. 1868.	Dr. A. Habel [C.].
g, *h*. ♂ ad.; *i*, *k*, *l*. ♀ ad.; *m*, *n*. ♂ imm. sk.	Abingdon Island, Dec. 1868 (*Dr. Habel*).	Salvin-Godman Coll.
o. ♂ imm. sk.	Abingdon Island, Dec. 1868 (*Dr. Habel*).	Sclater Coll.
p. ♂ ad.; *q*. ♀ ad.; *r*. ♂ juv. sk.	Bindloe Island, Nov. 1868.	Dr. A. Habel [C.].
s, *t*. ♂ ad.; *u*. ♀ ad.; *v*, *w*. ♂ ♀ imm. sk.	Bindloe Island, Nov. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.

2. CAMARHYNCHUS.

Type.

Camarhynchus, *Gould, P. Z. S.* 1837, p. 6 ..... C. psittaculus.

Range. Confined to the Galapagos Archipelago.

As with the genus *Geospiza*, the difference between the various species of *Camarhynchus* is simply one of size, and so no "key to the species" can be tabulated.

1. Camarhynchus variegatus.

Camarhynchus variegatus, *Sel. & Salv. P. Z. S.* 1870, pp. 323, 324; *id. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 489, pl. lxxxv. (1876).

Adult male. General colour sandy brown, the upper back and mantle darker brown, the feathers mottled with sandy-brown edges; upper tail-coverts blackish brown, edged with olive brown; wing-coverts blackish brown, with pale sandy margins to the greater coverts and bastard-wing; primary-coverts and quills dark brown, edged with pale olive-brown, the inner secondaries uniform dark brown; tail-feathers dark brown, edged with dark olive-brown like the upper tail-coverts; the outer feathers edged with sandy buff along the tip of the inner web; crown of head and nape, sides of face and sides of neck, cheeks, throat, and chest black, the chest-feathers broadly edged with sandy buff; remainder of the under surface of body sandy buff, the breast and sides of the body mottled with blackish centres to the feathers; centre of abdomen and under tail-coverts uniform sandy buff; thighs blackish; axillaries and under wing-coverts greyish olive with black centres, the greater coverts white at the ends; quills dusky below, ashy whitish along the inner web. Total length 5·5 inches, culmen 0·7, wing 3·35, tail 2·05, tarsus 1·1.

Adult female. General colour above brown washed with ashy olive, the lower back, rump, and upper tail-coverts slightly mottled with darker brown centres to the feathers; lesser wing-coverts like the back; median and greater coverts dark brown, edged with pale sandy olive; bastard-wing, primary-coverts, and quills dark brown, edged with ashy olive, paler on the primaries; tail-feathers dark brown, margined with olive and edged with whitish round the end of the inner web; crown a little deeper brown than the back; lores ashy buff; sides of face and ear-coverts brown; cheeks and under surface of body sandy yellowish with a slight olive tinge, the throat and chest mottled with dark-brown centres to the feathers, forming narrower streaks on the breast, a little broader on the sides of the body and flanks; abdomen and under tail-coverts uniform sandy yellowish; thighs yellowish, mottled with dark-brown centres to the feathers; axillaries pale yellowish; under wing-coverts yellowish, mottled with brown bases; quills dusky below, whitish along the inner webs. Total length 5·5 inches, culmen 0·65, wing 3·05, tail 2, tarsus 1·05.

The *immature male* resembles the female in plumage.

Adult males from Abingdon Island measure:—Wing 3·35 inches, tarsus 1·1.

Adult females from Abingdon Island measure :—Wing 3·05–3·1 inches, tarsus 1·05.

Young males from Abingdon Island measure :—Wing 3·15 inches, tarsus 1·05.

Adult females from Bindloe Island measure :—Wing 3·15 inches, tarsus 1·05.

The bill in both the specimens from Bindloe is yellowish, the birds having been shot in November, and being probably young or in winter plumage. The Abingdon examples, procured in December, have dark bills, those in the male being entirely black.

Hab. Abingdon and Bindloe Islands, Galapagos.

a, b. ♂ ♀ ad. sk.	Abingdon Island.	Dr. A. Habel [C.].
c, d. ♂ ♀ ad.; *e.* ♂ juv. sk.	Abingdon Island, Dec. (*Dr. A. Habel*).	Salvin-Godman Coll. (Types of species.)
f. ♀ ad. sk.	Bindloe Island, Nov. (*Dr. A. Habel*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Bindloe Island, Nov. 4.	Dr. A. Habel [C.].

2. Camarhynchus crassirostris.

Camarhynchus crassirostris, *Gould, P. Z. S.* 1837, p. 6; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 103, pl. xli. (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 542 (1850); *Gray, Hand-l. B.* ii. p. 89, no. 7306 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 489 (1876).

The type specimen is apparently a *young male*. It differs from *C. variegatus* in its uniform under surface not being mottled with brown streaks. It has a slight indentation in the cutting-edge of the upper mandible answering to *G. dentirostris* in the genus *Geospiza*. Total length 5·3 inches, culmen 0·6, wing 3·05, tail 1·9, tarsus 0·9.

Hab. Charles Island, Galapagos.

a. [♂ juv.] sk.	Charles Island.	Sir W. Burnett and Admiral Fitzroy [P.]. (Type of species.)

3. Camarhynchus psittaculus.

Camarhynchus psittaculus, *Gould, P. Z. S.* 1837, p. 6; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 102, pl. xl. (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 542 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 323; *Gray, Hand-l. B.* ii. p. 89, no. 7305 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 488 (1876).

Adult female (type of species). Similar to *C. crassirostris*, but a little smaller and without any indentation in the bill. Total length 4·6 inches, culmen 0·65, wing 2·75, tail 1·65, tarsus 0·9.

Another bird, also a supposed female (*Darwin*), has the wing 2·7 inches, the tarsus 0·9.

The female from Indefatigable has the wing 2·6 inches, the tarsus 0·85.

Hab. James and Indefatigable Islands, Galapagos.

a, *b*. [♀ ad.] sk.	James Island (*C. Darwin*).	Zoological Society [P.]. (Types of species.)
c. ♀ ad. sk.	Indefatigable Island, Sept. 14, 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.

4. Camarhynchus habeli.

Camarhynchus habeli, *Scl. & Salv. P. Z. S.* 1870, pp. 323, 325; *iid. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 490, pl. lxxxvi. (1875).

Adult male. Similar to the male of *C. variegatus*, but with the breast uniform black, not mottled with black spots. Total length 4·5 inches, culmen 0·55, wing 2·8, tail 1·7, tarsus 0·85.

Adult female. Similar to *C. psittaculus*, but smaller. Total length 4·4 inches, culmen 0·6, wing 2·7, tail 1·5, tarsus 0·85.

The males from Abingdon Island measure:—Wing 2·75 inches, tarsus 0·8–0·85.

The females from Abingdon Island measure:—Wing 2·6–2·7, tarsus 0·85.

The male from Bindloe Island measures:—Wing 2·8, tarsus 0·85.

Hab. Abingdon and Bindloe Islands, Galapagos.

a. ♂ ad.; *b*. ♀ ad. sk.	Abingdon Island, Dec. 1868 (*Dr. A. Habel*).	Salvin-Godman Collection. (Types of species.)
c, *d*. ♂ ♀ ad. sk.	Abingdon Island, Dec. 1868.	Dr. A. Habel [C.].
e. ♂ ad. sk.	Bindloe Island, Nov. 1868 (*Dr. A. Habel*).	Salvin-Godman Collection.

5. Camarhynchus prosthemelas.

Camarhynchus prosthemelas, *Scl. & Salv. P. Z. S.* 1870, pp. 323, 325; *iid. Nomencl. Av. Neotr.* p. 29 (1873); *Sundev. P. Z. S.* 1871, p. 125; *Salvin, Trans. Z. S.* ix. p. 490 (1876).

Adult (?) female. Similar to the female of *C. habeli*, but very much smaller. Total length 3·8 inches, culmen 0·45, wing 2·35, tail 1·4, tarsus 0·75.

A second female has the wing 2·45 inches.

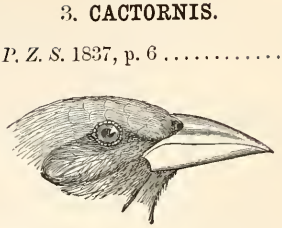
A young male resembles the female. Wing 2·35 inches, tarsus 0·8.

Hab. Indefatigable, Chatham, Charles, and James Islands, Galapagos.

a, *b*. ♀ ad. sk.	Indefatigable Island, Sept. 12, 1868 (*Dr. A. Habel*).	Salvin-Godman Coll. (Types of species.)
c. ♂ imm. sk.	Indefatigable Island, Aug. 26, 1868.	Dr. A. Habel [C.].
d. ♂ ad. st.	[James Island.]	Capt. Kellett and Lieut. Wood [P.].

3. CACTORNIS.

Type.
Cactornis, *Gould, P. Z. S.* 1837, p. 6 ..... C. scandens.



Head of *Cactornis scandens*.

Range. Confined to the Galapagos Archipelago.

1. Cactornis assimilis.

Cactornis assimilis, *Gould, P. Z. S.* 1837, p. 7; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 105, pl. xliii. (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 542 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 323; *Gray, Hand-l. B.* ii. p. 89, no. 7308 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 486 (1876).

Adult male. General colour above blackish, slightly varied with ashy-olive margins to the feathers, especially on the lower back, rump, and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts blackish, with sandy margins to the feathers; bastard-wing, primary-coverts, and quills blackish, narrowly edged with ashy olive, the primaries margined with hoary grey; tail-feathers blackish brown, edged with paler brown externally, and with sandy brown near the tips of the inner webs; head and neck rather browner than the back, the sides of the face, ear-coverts, throat, and breast blackish brown, the latter slightly mottled with sandy-brown edges; centre of abdomen buffy whitish, strongly mottled with blackish-brown centres to the feathers; sides of body, flanks, and thighs blackish brown, washed with ashy brown; under tail-coverts blackish brown, conspicuously edged with buffy whitish; under wing-coverts and axillaries blackish brown, edged with ashy olive. Total length 5 inches, culmen 0·9, wing 2·75, tail 1·4, tarsus 0·95.

Adult female. Similar to the male. Total length 5 inches, culmen 0·85, wing 2·75, tail 1·5, tarsus 0·85.

Hab. Bindloe Island and probably Charles or James Island. Mr. Darwin did not indicate the exact habitat of his specimen.

a. ♂ imm. sk.	Galapagos Islands (*C. Darwin*).	Zoological Society. (Type of species.)
b. [♀] ad. sk.	Galapagos Islands.	Sir W. Burnett & Admiral Fitzroy [P.].
c, d. ♂ ♀ imm. sk.; *e.* ♀ ad. sk.	Bindloe Island, Nov. (*Dr. A. Habel*).	Salvin-Godman Coll.

2. Cactornis scandens.

Cactornis scandens, *Gould, P. Z. S.* 1837, p. 7; *Darwin, Zool. Voy. 'Beagle,' Birds*, p. 104, pl. xlii. (1841); *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 542 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 323; *Gray, Hand-l. B.* ii. p. 89, no. 7307 (1870); *Sundev. P. Z. S.* 1871, p. 124; *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 485 (1876).

Tisserin des Gallapagoes, *Néboux, Rev. Zool.* 1840, p. 291.

Cactornis grimpeur, *Prévost et Des Murs, Voy. Vénus, Ois.* v. p. 204 (1855).

Adult male (type of species). Similar to *C. assimilis*, but smaller. Colour entirely black. Total length 4·8 inches, culmen 0·7, wing 2·65, tail 1·6, tarsus 0·8.

Adult female. Differs from the male in the same way as the female of *C. assimilis*. Total length 5 inches, culmen 0·65, wing 2·85, tail 1·6.

Young males resemble the adult females, but are generally darker and more sooty, the throat especially being sooty black.

Only one male in the series from Indefatigable Island has the bill entirely black, and this specimen has the base of the mandible horny yellow. The plumage is deep black, except on the lower back and rump, where there are still some greyish tips to the feathers. The under tail-coverts are also broadly margined with ashy white.

Another adult male has the bill reddish horn-colour, paler on the under mandible and black near the nostrils, as if the bill were gradually turning black. This specimen has the black plumage more sooty and obscured with ashy margins to the feathers on the back and breast, the abdomen being whitish.

It is difficult to determine whether these ashy edges to the black plumages of the males are the evidence of immaturity or of a seasonal plumage. It is, however, quite evident that the males take a considerable time before they attain the adult dress, and the way in which a blacker bill accompanies the fully black plumage seems to show that it is a sign of the breeding-season.

The adult males from Indefatigable measure:—Culmen 0·75–0·85, wing 2·9–3, tarsus 0·8–0·85.

The adult females from the same island measure:—Culmen 0·75–0·8, wing 2·7–2·8, tarsus 0·8–0·85.

The young males from the same island measure:—Culmen 0·75–0·8, wing 2·75–2·8, tarsus 0·8–0·85.

An adult male from Bindloe Island measures:—Culmen 0·8, wing 2·9, tarsus 0·9. It will be noticed that the tarsus is longer than in any other specimen in the series; but whether this slight difference would be borne out by a larger number of specimens from this island remains a question.

The variation in size in this species is somewhat remarkable, and the typical specimens from James Island are decidedly smaller than those from Indefatigable.

Hab. James, Indefatigable, and Bindloe Islands in the Galapagos Archipelago.

a, b. ♂ ♀ ad. sk.	James Island (*C. Darwin*).	Zoological Society [P.]. (Types of species.)
c, d. ♂ ad.; *e, f, g.* ♀ ad.; *h, i.* ♂ imm. sk.	Indefatigable Island, Sept. and Oct. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.
k, l. ♂ imm. sk.	Indefatigable Island (*Dr. A. Habel*).	Sclater Coll.
m, n. ♂ ♀ ad. sk.	Indefatigable Island.	Dr. A. Habel [C.].
o. ♂ ad. sk.	Bindloe Island, Nov. 7, 1868 (*Dr. A. Habel*).	Salvin-Godman Coll.

3. Cactornis abingdoni.

Cactornis abingdoni, *Scl. & Salv. P. Z. S.* 1870, p. 326; *id. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 486 (1876).

Adult male (type of species). Entirely sooty black, with the exception of some ashy margins to the feathers of the upper surfaces, these edgings broader and more distinct on the abdomen and under tail-coverts; the primaries distinctly margined with hoary grey; bill very narrow and entirely black. Total length 5·1 inches, culmen 0·85, wing 2·8, tail 1·6, tarsus 0·85.

The second male has the wing 2·75 inches, culmen 0·8, tarsus 0·8.

The black bill, which separates this species from *C. scandens*, may, after all, be only a sign of the breeding-season.

Hab. Abingdon Island, Galapagos.

a. [♂] ad. sk.	Abingdon Island, Dec. 1868 (*Dr. A. Habel*).	Salvin-Godman Coll. (Type of species.)
b. [♂] ad. sk.	Abingdon Island, Dec.	Dr. A. Habel [C.].

4. Cactornis pallida.

Cactornis pallida, *Scl. & Salv. P. Z. S.* 1870, p. 327; *id. Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Trans. Z. S.* ix. p. 487 (1876).

Male. (? *In seasonal plumage.*) General colour above pale olive-brown, with ashy margins to the feathers; lesser wing-coverts like the back; median and greater wing-coverts brown, edged with whity brown, more broadly on the former series; primary-coverts and quills dark brown, edged with ashy olive or paler olive-brown on the secondaries; tail-feathers brown, margined with olive-brown; head a little duller than the back; lores, eyelid, and feathers below the eye whitish tinged with olive-yellow; ear-coverts light olive-brown, with whitish shaft-lines; cheeks, throat, and under surface of body white, slightly washed with olive-yellow, with a few dusky streaks on the chest; flanks and sides of body pale fulvous-brown; under wing-coverts white, tinged with olive-yellow. Total length 4·8 inches, culmen 0·7, wing 2·7, tail 1·7, tarsus 0·85.

Adult female. Similar to the male. Total length 5 inches, culmen 0·65, wing 2·85, tail 1·7, tarsus 0·9.

The pale colour of the bill accompanies, as might be expected, the pale coloration of the plumage. The male described is either not an adult bird or it is in seasonal plumage; and I confidently expect that the adult males of *C. pallida* will turn out to be black. The smaller size and stouter and more arched bill will serve to distinguish the species.

Hab. Indefatigable Island, Galapagos.

a. ♂ ad. sk.	Indefatigable Island, Sept. 9, 1868 (*Dr. A. Habel*)	Salvin-Godman Coll. (Type of species.)
b. ♀ ad. sk.	Indefatigable Island, Sept. 14, 1868.	Dr. A. Habel [C.].

Section *β*. GROSBEAKS.

4. CHLORIS.

	Type.
Chloris, *Cuvier, Leçons d'Anat. Comp.* i. tab. 2 (1800)	C. chloris.
Ligurinus, *Koch, Syst. Baier. Zool.* i. p. 229 (1816)	C. chloris.
Serinus, *Boie, Isis*, 1822, p. 555 (*nec Koch*).....	C. chloris.
Chlorospiza, *Bp. Comp. List B. Eur. and N. Amer.* p. 30 (1838)	C. chloris.

Range. The whole of Europe, including also North-west Africa, Palestine, eastwards to the Caucasus and Turkestan; reoccurring in Eastern Siberia, Japan, and China.

Key to the Species.

a. With no yellow at base of outer web of secondaries.
  a'. Larger: no bright yellow eyebrow; head ashy or brown.
    a''. Outer tail-feathers yellow at base of both webs ..... *chloris* ♂, p. 23.
    b''. Outer tail-feathers edged with yellow on outer web ..... *chloris* ♀, p. 23.
  b'. Smaller: a yellow eyebrow; head yellow..... *chlorotica*, p. 26.
b. Secondaries yellow at base of outer web.
  c'. Larger: wing 3·5 inches ..... *kawarahiba*, p. 28.
  d'. Smaller: wing 3·5 inches..... *sinica*, p. 26.

1. Chloris chloris.

The Greenfinch, *Albin, Nat. Hist. B.* i. p. 56, pl. 58 (1738); *Penn. Brit. Zool.* p. 107, pl. 105. fig. 5 (1766).
Le Verdier, *Briss. Orn.* iii. p. 190 (1760); *Daubent. Pl. Enl.* iv. pl. 267. fig. 2 (*fig. pess.*); *Montb. Hist. Nat. Ois.* iv. p. 171 (1778).
Loxia chloris, *Linn. Syst. Nat.* i. p. 304 (1766); *Yarr. Brit. B.* i. p. 479 (1843).
Le Bruant de France, *Montb. Hist. Nat. Ois.* iv. pl. xv. (1778).
Green Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 134 (1783).
Coccothraustes chloris, *Pall. Zoogr. Rosso-Asiat.* ii. p. 13 (1811); *Steph. in Shaw's Gen. Zool.* xiv. p. 87 (1826); *Ménétr. Cat. Rais.*

Cauc. p. 42 (1832); *Gould, B. Eur.* iii. pl. 200 (1837); *Hewits. Eggs Brit. B.* i. p. 157, pl. 43. fig. 1 (1846); *Thomps. B. Irel.* i. p. 257 (1849); *R. Gray, B. W. Scotl.* p. 143 (1871); *Harting, Handb. Brit. B.* p. 29 (1872); *Newt. ed. Yarr. Brit. B.* ii. p. 105 (1876).

Fringilla chloris, *Temm. Man. d'Orn.* p. 346 (1815); *Meyer, Vög. Liv- u. Esthl.* p. 76 (1815); *Roux, Orn. Prov.* pls. 77, 78 (1825); *Naum. Vög. Deutschl.* v. Taf. 120 (1826); *Werner, Atlas, Granivores*, pl. 38 (1827); *Crespon, Orn. Gard.* p. 241 (1840); *Keys. u. Blas. Wirb. Eur.* p. xlii (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 184 (1840); *Selys-Longch. Faun. Bely.* p. 74 (1842); *Schl. Rev. Crit.* p. lxi (1844); *Gray, Gen. B.* ii. p 371 (1849); *Kjærb. Danm. Fugle*, pl. 26. fig. 2 (1852); *Schl. Vog. Nederl.* pl. 164 (1854); *Sundev. Svensk. Fogl.* pl. v. figs. 3, 4 (1856); *Linderm. Vög. Griechenl.* p. 61 (1860); *Schl. Dier. Nederl. Vog.* pl. 16. figs. 5, 6 (1861); *Gray, List Brit. B.* p. 96 (1863); *Sperling, Ibis*, 1864, p. 280; *More, Ibis*, 1865, p. 127; *Rowley, t. c.* p. 178; *Borggr. Vogelf. Norddeutschl.* p. 76 (1869); *Keulem. Onze Vog.* i. pl. 35 (1869); *Gray, Hand-l. B.* ii. p. 83, no. 7219 (1870); *Fritsch, Vög. Eur.* pl. 17. fig. 12 (1870); *Elwes & Buckley, Ibis*, 1870, p. 193; *Hutton, t. c.* p. 397; *Brooke, Ibis*, 1873, p. 247; *Lilford, Ibis*, 1875, p. 10; *Danf. & Harvie-Brown, t. c.* p. 413; *Fallon, Ois. Bely.* p. 97 (1875); *Seebohm, Ibis*, 1882, p. 218; *Dixon, t. c.* p. 576; *Seebohm, Ibis*, 1883, p. 9; *id. Hist. Brit. B.* ii. p. 74 (1884).

Ligurinus chloris, *Koch, Syst. Baier. Zool.* p. 230 (1816); *Salvin, Ibis*, 1859, p. 313; *Degl. & Gerbe, Orn. Eur.* i. p. 269 (1867); *Gould, B. Gt. Br.* iii. pl. 39 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 152 (1871); *Saunders, Ibis*, 1871, p. 219; *Dresser, B. Eur.* iii. p. 567, pl. 174 (1875); *Wharton, Ibis*, 1876, p. 25; *Danf. Ibis*, 1878, p. 23; *B. O. U. List Brit. B.* p. 49 (1883); *Irby, Ibis*, 1883, p. 83; *Clarke, Ibis*, 1884, pp. 142, 375; *Whitehead, Ibis*, 1885, p. 39.

Serinus chloris, *Boie, Isis*, 1822, p. 555.

Chloris pinetorum, *Brehm, Vög. Deutschl.* p. 259 (1831).

Chloris hortensis, *Brehm, Vög. Deutschl.* p. 260 (1831).

Chloris septentrionalis, *Brehm, Vög. Deutschl.* p. 261 (1831).

Chloris flavigaster, *Swains. Classif. B.* ii. p. 281 (1837).

Linaria chloris, *Macgill. Brit. B.* i. p. 365 (1837).

Chlorospiza chloris, *Bp. Comp. List B. Eur. & N. Amer.* p. 36 (1838); *id. Consp.* i. p. 514 (1850); *Tristr. Ibis*, 1859, p. 33; *Jaub. & Barth.-Lapomm. Rich. Orn.* p. 115 (1859); *Wright, Ibis*, 1864, p. 51; *Filippi, Viagg. Pers.* p. 349 (1865); *Bettoni, Ucc. nidif. Lomb.* i. pl. 21 (c. 1865); *Giglioli, Ibis*, 1865, p. 57; *Loche, Expl. Sci. Algér., Ois.* i. p. 149 (1867); *Tristr. Ibis*, 1868, p. 206; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Irby, B. Gibr.* p. 120 (1875); *Dresser, Ibis*, 1876, p. 241; *Radde, Orn. Cauc.* p. 178 (1884).

Ligurinus aurantiiventris, *Cab. Mus. Hein.* Th. i. p. 158, note (1850).

Chloris viridis, C. flavigaster, C. montana, C. brachyrhynchos, C. curvirostris, *Brehm, Naum.* 1855, p. 276; *id. Vogelf.* p. 95 (1855).

Chlorospiza aurantiiventris, *Drake, Ibis*, 1867, p. 427; *Gurney, Ibis*, 1871, p. 293.

Chloris viridis, *Doderl. Avif. Sicil.* p. 27 (1869).

Fringilla aurantiiventris, *Gray, Hand-l. B.* ii. p. 83, no. 7218 (1870).

Ligurinus chloroticus, *Saunders, Ibis*, 1871, p. 219.

Chrysomitris chloris, *Brooks, Ibis*, 1872, p. 469.

Nestling. Resembles the old female in being brown above with scarcely any yellow; the whole upper surface streaked with dusky brown; lesser wing-coverts like the back; median and greater coverts dusky brown, externally pale brown and fulvous brown at the tips, forming a double wing-bar, the outer greater coverts edged with olive-yellow; bastard-wing, primary-coverts, and quills blackish brown, edged with olive-yellow, the secondaries with pale brown; tail-feathers dusky brown, edged with pale brown; lores and feathers over the eye saffron-buff; sides of face brown, washed with yellow; under surface of body pale yellow, brighter on the chin; the throat, breast, and sides of body streaked with dusky brown, the sides of the body and flanks more fulvescent.

The full-grown young bird resembles the nestling-plumage, but is broadly streaked with dusky below, and has bright yellow edges to the quills and a distinct yellow line to the tail-feathers.

Adult male. General colour above olive-yellow, overshaded with ashy grey, the feathers being edged with the latter colour; lower back and rump brighter olive-yellow; scapulars, lesser and median wing-coverts olive-yellow like the back; greater coverts ashy grey; bastard-wing bright yellow, ashy grey at the ends; primary-coverts dusky, edged with olive-yellow, ashy towards the tips; quills dusky, the primaries edged with bright yellow, the secondaries externally ashy grey, the inner ones broadly edged and tipped with the latter colour; upper tail-coverts olive-yellow, broadly edged with ashy grey; tail-feathers yellow at the base, blackish at the ends and edged with ashy grey; crown of head like the back but strongly washed with ashy; lores blackish; forehead and eyebrow brighter yellow; sides of face yellow; ear-coverts ashy grey; cheeks yellow, washed with ashy; under surface of body yellow, slightly washed with ashy grey; lower abdomen whitish; sides of body and flanks browner, washed with ashy; thighs and under tail-coverts yellow, the latter margined with ashy whitish; under wing-coverts and axillaries bright yellow, with ashy bases; quills below dusky, ashy along the inner edge; bill fleshy pink; legs, toes, and claws pale brown; iris hazel. Total length 6 inches, culmen 0·55, wing 3·35, tail 2·25, tarsus 0·7.

The winter plumage of the adult male is distinguished by being browner than the summer plumage, the olive-yellow being entirely concealed. The yellow base to the tail and the yellow on the primaries *reaching to the shaft of the feather* will always distinguish an old male.

Adult female. Browner than the male. General colour above brown, with paler edges to the feathers of the mantle; lower back and rump greenish yellow; lesser wing-coverts dull olive-yellow; median coverts dusky, washed with olive-yellow at the ends; greater coverts brown, washed with ashy and inclining to ashy whitish at the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with olive-yellow, the primaries brighter yellow on the outer web; the secondaries brown externally, the inner ones ashy towards the ends like the greater coverts; upper tail-coverts dull ashy; tail-feathers blackish brown, edged with yellow near the base and with

ashy towards the ends, the inner web yellowish towards the base; crown of head like the back, slightly washed with yellow on the forehead and over the eye; lores ashy whitish; ear-coverts and cheeks brown, with a faint tinge of yellow; chin whitish; under surface of body brown, washed with yellow on the throat and breast; abdomen whitish; sides of body and flanks brown, faintly streaked with darker brown; thighs whitish; under tail-coverts brown, with ashy-whitish edgings; under wing-coverts and axillaries yellow, with ashy bases; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·6, wing 3·4, tail 2·15, tarsus 0·65.

The female Greenfinch can always be distinguished from the male by the yellow on the primaries being merely a margin and never reaching to the shaft; the base of the tail also is not yellow, nor is there any yellow base to the bastard wing.

The young male, after its first moult, resembles the old female, but has more yellow on the under surface; and it can always be told by the wings and tail, which are like those of the adult.

The South-European form, *C. aurantiiventris*, is similar to *C. chloris*, but is, as a rule, smaller and brighter coloured, with much less ashy grey on the upper surface and brighter yellow on the abdomen. The female bird seems to be different from the ordinary female of the North-European Greenfinch, being much more ashy brown, with faint dusky streaks below. It is a mistake to suppose that the bright form is confined to South Europe, for Mr. Hargitt has presented a specimen to the Museum from the vicinity of Havre, which is almost entirely yellow above, and approaches the Palestine race. The true distribution of the Greenfinches and their various races, if such exist, requires the study of a larger series of skins than I have been able to meet with at present; and I have not attempted to separate the synonymy of *C. chloris* and *C. aurantiiventris*. It may be also noted that there is considerable difference in English specimens, the birds that visit us in spring and migrate in the autumn being altogether paler and brighter in colour than the resident birds.

Hab. Europe generally; the countries bordering the Mediterranean; accidental in Madeira; extending eastwards to Persia and North-western Turkestan.

a, b. ♂ ♀ ad. sk.	Orkneys (*Dunn*).	R. B. Sharpe, Esq. [P.].
c. ♂ ad. sk.	Hawkstone, Shropshire.	Gould Collection.
d, e. ♂ ad. st.	Leicestershire.	Theodore Walker, Esq. [P.].
f, g. Pull.; *h. i.* Juv.; *k, l.* ♂ ♀ ad. st.	Cambridgeshire.	Mr. J. Baker.
m. ♂ ad. sk.	Cambridgeshire, April 17, 1856 (*O. S.*).	Salvin-Godman Coll.
n, o. ♂ ♀ ad. sk.	Cambridgeshire, Jan. 1856 (*J. Baker*).	Salvin-Godman Coll.

p. ♀ var. sk.	Cambridgeshire, Nov. 1855 (*O. S.*).	Salvin-Godman Coll.
q, *r*. ♂ ad. st.	Suffolk.	Dr. Günther [P.].
s. ♂ ad. sk.	Iffley, near Oxford, Nov. 1, 1877.	J. T. Mallam, Esq. [P.].
t, *u*. Pull. sk.	Cookham, Berks, June.	Gould Coll.
v, *w*. ♂ ♀ ad. sk.	Cookham, Jan. 1879 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
x. ♂ ad. sk.	Hampstead, Feb. 1885 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
y, *z*; *a'* ♂ ad. sk.	Taplow, April (*J. G.*).	Gould Coll.
b'. ♂ ad. sk.	Hampstead, April 8, 1870 (*R. B. S.*).	Hume Coll.
c'. ♂ ad. sk.	Surrey, Jan. 1857 (*F. D. G.*).	Salvin-Godman Coll.
d'. ♂ ad. st.	Brighton, summer.	R. B. Sharpe, Esq. [P.]
e'. ♂ ad. sk.	Brighton, March 1882.	R. B. Sharpe, Esq. [P.].
f'. ♂; *g'*, *h'*, *i*. ♀ ad. sk.	Brighton, Oct. 1883.	R. B. Sharpe, Esq. [P.].
k'. ♂ ad. st.	Brighton, Oct. 1883.	R. B. Sharpe, Esq. [P.].
l', *m'*. ♂ ♀ ad. sk.	Brighton, Nov. 1883.	R. B. Sharpe, Esq. [P.].
n'. ♂ ad. st.	Brighton, Dec. 1883.	R. B. Sharpe, Esq. [P.].
o'. Ad. st.	Brighton.	R. B. Sharpe, Esq. [P.].
p', *q'*. ♂; *r'*, *s'*. ♀ ad. sk.	Lancing, Sussex, April.	R. B. Sharpe, Esq. [P.].
t'. ♀ ad. sk.	Avington, Hants, Oct. 15, 1866.	Capt. Shelley [P.].
u', *v'*. ♂ ♀ ad. sk.	Avington, Hants, Nov. 21, 1865.	Capt. Shelley [P.].
w'. ♂ ad. sk.	Avington, Hants, Nov. 11, 1873.	R. B. Sharpe, Esq. [P.].
x'. ♂ ad. sk.	Avington, Hants, May 12, 1877.	R. B. Sharpe, Esq. [P.].
y'. ♂ ad. sk.	Devonshire.	Montagu Collection.
z'. ♂ ad. sk.	Norway, March 25, 1881 (*R. Collett*).	Christiania Museum [P.].
α. ♀ ad. sk.	Norway, April 1873 (*R. C.*).	Christiania Museum [P.].
β. Juv. sk.	Norway, June 1866 (*P. Godman*).	Salvin-Godman Coll.
γ. ♂ ad. sk.	Denmark, Feb. 1871 (*A. Benzon*).	Hume Coll.
δ. ♂ ad. st.	Heligoland.	L. Gätke [P.].
ε. ♂ ad. sk.	France.	Gould Coll.
ζ. ♂ ad. sk.	Havre, Oct. 27, 1873 (*V. Pluché*).	E. Hargitt, Esq. [P.].
η. ♂ ad. sk.	Havre, June 30, 1873 (*V. Pluché*).	E. Hargitt, Esq. [P.].
θ. ♂ ad. sk.	Havre, May 9, 1876 (*V. Pluché*).	E. Hargitt, Esq. [P.].
ι. ♂ ad. sk.	Gibraltar (*L. H. Irby*).	Hume Coll.
κ. ♂ ad. sk.	Morocco.	R. B. Sharpe, Esq. [P.].
λ. ♀ var. alb. sk.	Constantine, Algeria.	Purchased.
μ. ♀ ad. sk.	Asia Minor (*T. Robson*).	Hume Coll.
ν. ♀ ad. sk.	Smyrna, April 1875 (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].

ξ. ♀ ad. sk.	Smyrna, Nov. 8, 1876 (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
o. ♂ ad. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll.
π, *ρ*. Skeletons, mounted.	England.	Purchased.
σ, *τ*. Skeletons, unmounted.	England.	Purchased.
υ. Skull.	England.	Purchased.
φ, *χ*, *ψ*. Skulls.	S. Germany.	Dr. Günther.

Subsp. *a*. **Chloris chlorotica.**

Ligurinus chloroticus, *Cab. Mus. Hein.* Th. i. p. 158, note (1850).
Chlorospiza chlorotica, *Tristr. Ibis*, 1868, p. 206.
Fringilla chlorotica, *Gray, Hand-l. B.* ii. p. 83, no. 7218 (1870); *Seebohm, Hist. Brit. B.* ii. p. 74 (1884).
Coccothraustes chloroticus, *Tristr. Faun. & Flor. Palest.* p. 66 (1884).

Adult male. Similar to *C. chloris*, but everywhere much brighter yellow, without any grey on the head and back (or at the most only faint traces of it); forehead, eyebrow, cheeks, and under surface clear olive-yellow, bright yellow on the breast and abdomen. Total length 5·7 inches, culmen 0·45, wing 3·25, tail 2, tarsus 0·7.

Adult female. Resembles the female of *C. chloris*, but is yellow underneath, without any dusky-brown stripes. Total length 5·2 inches, culmen 0·5, wing 3, tail 1·85, tarsus 0·6.

Hab. Syria and Palestine, probably wintering in Arabia.

a. ♂ ad. sk.	Mount Tabor, Palestine.	Canon Tristram [C.].
b. ♀ ad. sk.	Caiffa.	Canon Tristram [C.].

2. **Chloris sinica.**

Le Pinçon de la Chine, *Briss. Orn.* iii. p. 175, pl. vii fig. 2 (1760).
Fringilla sinica, *Linn. Syst. Nat.* i. p. 321 (1766); *Gm. Syst. Nat.* i. p. 910 (1788); *Gray, Gen. B.* ii. p. 371 (1849); *Swinh. Ibis*, 1871, p. 585; *Gray, Hand-l. B.* ii. p. 83, no. 7222 (1870); *Seebohm, Ibis*, 1884, p. 267; *id. Hist. Brit. B.* ii. p. 75 (1884).
L'Olivette, *Montb. Hist. Nat. Ois.* iv. p. 144 (1778).
Chinese Finch, *Lath. Gen. Syn.* ii. pt. 1, p. 277 (1883).
Ligurinus sinicus, *Blyth, Cat. B. Mus. As. Soc.* p. 124 (1849); *Swinh. Ibis*, 1860, p. 6; *Blakist. Ibis*, 1862, p. 327.
Fringilla kawarahiba, var. minor, *Temm. & Schl. Faun. Jap., Aves*, pl. 49 (1850); *Radde, Reis. Sibir.* p. 189 (1863).
Chlorospiza sinica, *Bp. Consp.* i. p. 514 (1850); *Whitely, Ibis*, 1867, p. 202; *Tacz. Bull. Soc. Zool. France*, i. p. 181 (1876); *Blakist. & Pryer, B. Japan*, p. 133 (1882); *Blakist. Amended List B. Japan*, p. 18 (1884); *Jouy, Pr. U. S. Nat. Mus.* vi. p. 294 (1884).

Adult male. General colour above chocolate-brown, washed with olive-yellow: rump clear olive-yellow; lesser wing-coverts like the back, the outer ones near the edge of the wing bright yellow; median coverts like the back; greater coverts dusky, ashy at the ends, the

outer ones yellow on the inner web; bastard-wing black, yellow at the base and on the outer web; primary-coverts black; quills black, tipped with hoary white, the inner secondaries broadly edged and tipped with pale ashy, all golden yellow at the base, the shafts black to the base; upper tail-coverts ashy grey; centre tail-feathers blackish, edged and tipped with ashy grey, the rest black for the terminal half, edged with ashy grey, the basal half bright yellow; crown of head ashy grey, tinged with olive, more dusky on the base of the forehead; lores and eyelid dusky; cheeks and throat olive-yellow, shaded with grey; breast, sides of body, and flanks chocolate-brown, washed with ashy; centre of abdomen brighter yellow, whitish towards the vent; thighs ashy, washed with yellow; under tail-coverts bright yellow; under wing-coverts and axillaries bright yellow; quills below dusky, yellow along the inner webs. Total length 5·3 inches, culmen 0·5, wing 3·35, tail 1·9, tarsus 0·65.

Adult female. Differs from the male in being much duller in colour, and browner above, the head being brown like the back, and the rump and upper tail-coverts also pale brown; wing-coverts like the back; the greater series black, externally edged with brown, and with yellow near the base; bastard-wing and primary-coverts black; quills black, edged with brown, the inner secondaries very broadly margined and tipped with pale brown, all but the latter quills bright yellow at the base; tail as in the male, but the yellow basal portion more restricted; sides of face brown, wth a slight tinge of olive-yellow on the ear-coverts and above the eye; cheeks dusky brown; throat ashy brown; fore neck, breast, and sides of body chocolate-brown, tinged with yellow, the abdomen and thighs whitish; under tail-coverts ashy white, washed with yellow; under wing-coverts, axillaries, and inner lining of quills bright yellow. Total length 5·3 inches, culmen 0·5, wing 3, tail 1·7, tarsus 0·65.

The *adult male in winter plumage* only differs from the summer plumage in being browner, the grey portions of the plumage being shaded with brown, and the quills tipped and edged with pale brown; the yellow on the bend of the wing also not so bright.

Young males in first winter plumage resemble the old female, but are more ashy on the head and hind neck, and show some dusky streaks, especially on the latter; there is a little more yellow on the under surface than in the adult female.

Hab. Eastern Siberia, Japan, and China.

a, *b*. ♂ ♀ ad. sk.	Amoor Land, May.	Purchased.
c, *d*. ♂ ♀ ad. sk.	Yohohama, Japan.	Prof. Milne [C.].
e. ♂ ad. sk.	Yokohama, Japan, Feb. 12, 1870 (*Capt. Conrad*).	R. B. Sharpe, Esq. [P.].
f. ♂ ad. sk.	Hakodadi, April 1, 1865 (*H. Whitely*).	Gould Coll.
g. ♂ imm. sk.	Nagasaki.	Capt. St. John [C.].
h. ♀ ad. sk.	Nagasaki, Dec. 17, 1876.	F. Ringer, Esq. [P.].
i–m. ♂ ad. sk.	Nagasaki, Jan. 7, 1877.	F. Ringer, Esq. [P.].
n. ♀ ad. sk.	Nagasaki, Nov. 25, 1879.	F. Ringer, Esq. [P.]
o. ♂ ad. st.	China.	J. R. Reeves, Esq. [P.].

p. ♂ ad. sk.	China.	J. R. Reeves, Esq. [P.].
q, *r*. ♂ imm. et ♀ ad. sk.	Fokien, China.	Gould Coll.

3. Chloris kawarahiba.

Fringilla kawarahiba, *Temm. & Schl. Faun. Jap., Aves*, pl. xlviii. (1850); *Whitely, Ibis*, 1867, p. 202; *Seebohm, Hist. Brit. B.* ii. p. 75 (1884).

Chlorospiza kawarahiba, *Bp. Consp.* i. p. 514 (1850); *Blakist. & Pryer, B. Japan*, p. 173 (1882); *id. Amended List B. Japan*, p. 17 (1884).

Fringilla kawariba, *Gray, Hand-l. B.* ii. p. 83 (1870).

Adult male. Similar to *C. sinica*, but larger, and the colours not quite so vivid. Total length 5·5 inches, culmen 0·55, wing 3·5, tail 2·1, tarsus 0·7.

Adult female. Similar to the female of *C. sinica*, but somewhat larger. Total length 6 inches, culmen 0·55, wing 3·4, tail 2·05, tarsus 0·75.

Hab. Japan.

a. ♀ ad. sk.	Hakodadi, Oct. 13, 1865 (*H. Whitely*).	Gould Coll.
b. ♂ ad. sk.	Japan.	Gould Coll.
c. ♂ ad. sk.	Nagasaki, Japan.	F. Ringer, Esq. [P.].
d. ♂ ad. sk.	Nagasaki.	F. Ringer, Esq. [P.].
e, *f*. Ad. st.	Japan.	Leiden Museum.

5. EOPHONA.

Type.

Eophona, *Gould, B. of Asia*, part iii. (1851) ..... ? E. personata.

Range. Eastern Siberia, Japan, and China.

Key to the Species.

a. Primaries tipped with white for about an inch. *melanura* ♂, p. 29.
b. Primaries black.
  a'. Primaries edged with white at the tips, the secondaries more broadly tipped ..... *melanura* ♀, p. 29.
  b'. Primaries black, with no white tips, but a broad white bar across the middle; no white tips to the secondaries ..... *personata* ♂, p. 30.

1. Eophona melanura.

Le Grosbec de la Chine, *Sonn. Voy. Ind. Orient.* ii. p. 199 (1782).

Grey-necked Grosbeak, *Lath. Gen. Syn.* ii. pt. i. p. 143 (1783).

Loxia melanura, *Gm. Syst. Nat.* i. p. 853 (1788).

Coccothraustes melanura, *Jard. & Selby, Ill. Orn.* ii. pl. 63 (1837); *Gray, Gen. B.* ii. p. 358 (1844); *Swinh. Ibis*, 1860, p. 61, 1861, p. 45, 1867, p. 370; *Gray, Fasc. B. China*, p. 5, pl. iv. (1871); *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871); *Blak. & Pryer, Ibis*, 1878, p. 246; *iid. B. Japan*, p. 175 (1882); *Blakist. Amended List B. Japan*, p. 30; *Seebohm, Ibis*, 1884, p. 266.

Hesperiphona melanura, *Bp. Consp.* i. p. 506 (1850).
Eophona melanura, *Gould, B. Asia*, v. pl. 19 (1851); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 462 (1854); *Gray, Hand-l. B.* ii. p. 88, no. 7293 (1870); *Swinh. P. Z. S.* 1871, p. 386; *id. Ibis*, 1873, p. 372, 1875, p. 121; *Dybowski, J. f. O.* 1876, p. 199; *Tacz. Bull. Soc. Zool. France*, i. p. 181 (1876); *David & Oust. Ois. Chine*, p. 347, pl. 92 (1877).

Adult male. General colour above pale chocolate-brown, lighter and more ashy on the rump, becoming ashy whitish just before the upper tail-coverts; lesser wing-coverts dark brown; median and greater coverts glossy purplish black; bastard-wing and primary-coverts blackish brown, the latter with a small subterminal spot of white, forming a speculum; quills blackish brown, the primaries with a broad subterminal band of white; inner primaries tipped with white; secondaries externally glossy purplish black, and broadly tipped with white; upper tail-coverts and centre tail-feathers glossy purplish black, the rest of the tail-feathers black, externally glossy black; crown of head glossy black, as well as the lores, sides of face, ear-coverts, cheeks, and throat; the latter separated from the breast by an indistinct whitish line; sides of neck brown; fore neck and breast brown, with a slight tinge of tawny; abdomen white, with a slight ashy tinge; sides of body and flanks deep tawny; thighs dark ashy; under tail-coverts white; under wing-coverts and axillaries black, narrowly tipped with white; quills below dusky, ashy on the inner edge, with the same white streaks as on the upper surface: "bill yellow, with the tip green; feet white; iris rufous" (*A. David*). Total length 6·7 inches, culmen 0·8, wing 3·85, tail 2·75, tarsus 0·85.

Adult female. Wants the black head and face of the male, the whole head and throat being ashy or drab-brown; wing-coverts ashy brown, the greater series black at the ends; primary-coverts and bastard-wing dusky brown, the former blackish; quills black, edged with white near the ends of the primaries, the secondaries tipped with white, the innermost pale brown, edged with purplish black, fringed with white; rump and upper tail-coverts drab-grey, as also the centre tail-feathers, the remainder brown, black externally and at the ends; throat and breast drab-brown, the latter tinged with ochreous; abdomen and under tail-coverts white; sides of body ochreous or tawny buff; thighs dark ashy grey; under wing-coverts and axillaries dark drab-brown; quills dusky below, ashy along the inner web. Total length 6·4 inches, culmen 0·7, wing 3·75, tail 2·6, tarsus 0·75.

Old specimens have the tips of the primaries white, this colour being gradually assumed.

Hab. Southern and Central China, ranging northwards in summer into North China and Eastern Siberia; of doubtful occurrence in Japan, according to Blakiston.

a. ♂ ad. sk.	China.	Gould Coll.
b, c, d. ♂ ad. sk.; *e, f.* ♀ ad. sk.	North China.	C. Maries, Esq. [C.].

g, h. ♂ ♀ ad. sk.	Fokien, China.	Gould Coll.
i. ♂ ad. sk.	Shanghai.	Gould Coll.
k, l. ♂ ♀ ad. sk.	Amoy, Nov. 1866 (*R. Swinhoe*).	Hume Coll.
m. Ad. st.	China.	J. R. Reeves, Esq. [P.].

2. Eophona personata.

Coccothraustes personatus, *Temm. & Schl. Faun. Jap., Aves*, pl. lii. (1850); *Whitely, Ibis*, 1867, p. 201; *David, N. Arch. Mus.* vii. *Bull.* p. 11 (1871); *Blakist. & Pryer, Ibis*, 1878, p. 245; *iid. B. Japan*, p. 175 (1882).

Hesperiphona personata, *Bp. Consp.* i. p. 506 (1850).

Eophona personata, *Gould, B. Asia*, v. pl. 18 (1851); *Gray, Hand-l. B.* ii. p. 88, no. 3294 (1870); *Swinh. P. Z. S.* 1871, p. 386; *Dybowski, J. f. O.* 1876, p. 199; *Tacz. Bull. Soc. Zool. France*, i. p. 181 (1876); *David & Oust. Ois. Chine*, p. 346, pl. 91 (1877); *Swinh. Ibis*, 1877, p. 145; *Blakist. & Pryer, B. Japan*, p. 175 (1882); *Jouy, Pr. U. S. Nat. Mus.* vi. p. 295 (1883); *Blakist. Amended List B. Japan*, pp. 18, 63 (1884).

Adult male. General colour above pale drab or ashy grey, slightly washed with drab-brown on the scapulars; lesser wing-coverts blackish, externally glossy steel-black; median and greater coverts glossy steel-black, the inner ones like the back, or black with a median streak of drab-grey; bastard-wing and primary-coverts black; quills black, the primaries with a bar of white across them, not seen on the outermost, and only found on the outer web of the two innermost; secondaries externally glossy steel-black, except the innermost ones, which are drab with a broken tinge like the scapulars; upper tail-coverts like the back; centre tail-feathers glossy blue-black, velvety black at the ends; the remainder black, externally glossy blue-black; crown of head black as far as the feathers round eye, and a bar down the fore part of the face black, joining the chin, which is also black; ear-coverts pale drab, separated from the black of the face by a narrow line of whitish; hinder cheeks like ear-coverts; throat white in the centre, the chin and upper throat black; sides of throat, sides of neck, fore neck, and breast pale drab-grey; abdomen whiter; sides of body and flanks pale drab-grey: thighs grey; under tail-coverts white; under wing-coverts and axillaries white; quills below blackish, the white bar on the primaries showing below: "bill yellow; feet greyish reddish; iris reddish" (*A. David*); "iris light hazel" (*H. Whitely*). Total length 8·5 inches, culmen 0·95, wing 4·45, tail 3·1, tarsus 0·9.

Hab. Eastern Siberia, Japan, extending to Northern and Western China.

a. ♂ ad. sk.	Hakodadi, Nov. 2, 1864.	Mr. Henry Whitely [C.].
b, c. ♂ ♀ ad. sk.	Nagasaki, Oct. 29, 1879.	F. Ringer, Esq. [P.].
d. ♂ ad. sk.	Nagasaki, Dec. 31, 1879.	F. Ringer, Esq. [P.].
e. Ad. sk.	Japan.	Gould Coll.

6. CHAUNOPROCTUS.

Chaunoproctus, *Bp. Consp.* i. p. 526 (1850) ..... Type. C. ferreirostris.

Range. Bonin Islands, Japanese Sea.

1. Chaunoproctus ferreirostris.

Coccothraustes ferreirostris, *Vig. Zool. Journ.* iv. p. 354 (1828); *id. in Beechey's Voy. 'Blossom,'* p. 22, pl. 8 (1839); *Gray, Gen. B.* ii. p. 358 (1844).

Fringilla papa, *Kittl. Mem. pres. Acad. Imp. Sci. St. Pétersb.* i. p. 239 pl. 15 (1830); *id. Kupf. Vög.* p. 24, pl. 32. fig. 2 (1832).

Mycerobas ferreirostris, *Cab. in Wiegm. Arch. f. Naturg.* xiii. p. 350 (1847).

Chaunoproctus papa, *Bp. Consp.* i. p. 526 (1850); *id. & Schl. Monogr. Loxiens*, p. 32, pls. 37, 38 (1850); *Blakist. Amended List B. Japan*, p. 63 (1884).

Coccothraustes papa, *Gray, Hand-l. B.* ii. p. 88, no. 7296 (1870).

Adult male. General colour above brown, with darker centres to the feathers of the back, which have a reddish tinge; wing-coverts brown; bastard-wing, primary-coverts, and quills dusky brown, washed externally with lighter brown, rather more ashy on the primaries; upper tail-coverts like the back; tail-feathers dusky brown; crown of head and hind neck brown, washed with crimson; the forehead, lores, eyebrow, sides of face, ear-coverts, cheeks, and under surfaces of body crimson, paler on the throat and breast; abdomen ashy whitish; sides of body and flanks brown, with a slight reddish tinge; thighs brown; under tail-coverts ashy brown; under wing-coverts and axillaries ashy brown, with a slight rosy tinge; quills below dusky, ashy brown along the inner edge. Total length 7 inches, culmen 0·95, wing 4·25, tail 2·8, tarsus 1·1.

Adult female. Different from the male. General colour above brown, the dorsal feathers darker-centred and slightly washed with olive; the wing-coverts like the back; bastard-wing, primary-coverts, and quills dusky brown, edged with brown like the back, paler on the primaries; upper tail-coverts like the back; tail-feathers dusky brown, externally like the back; crown of head like the back; lores dusky brown; eyebrow pale ashy brown; ear-coverts and cheeks brown; throat and under surface of body light ochreous brown, the abdomen rather paler; sides of body and flanks brown; thighs brown; under tail-coverts pale brown with whitish edges; under wing-coverts and axillaries light brown; quills below dusky, ashy on the inner edge. Total length 7·5 inches, culmen 1·15, wing 4·2, tail 2·9, tarsus 1·1.

Hab. Island of Bonin-Sima.

a, b. ♂ ♀ ad. sk.	Bonin-Sima.	Voy. H.M.S. 'Sulphur.' (Types of species.)

7. HESPERIPHONA.

Type.
Hesperiphona, *Bp. C. R.* xxxi. p. 424 (1850) ..... H. vespertina.

Range. Rocky Mountains, and eastwards to Lake Superior, north to the Fur Countries, and southward to Mexico and Guatemala.

Key to the Species.

a. Crown black.
  a'. A yellow forehead and eyebrow ..... *vespertina* ♂ ad., p. 32.
  b'. No yellow forehead.
    a''. No white alar speculum.
      a'''. Sides of face and throat black .... *abeillæi* ♂ ad., p. 34.
      b'''. Sides of face greenish yellow; throat ashy brown ..... *abeillæi* ♂ imm., p. 35.
    b''. A white alar speculum at base of middle primaries ..... *abeillæi* ♀ ad., p. 35.
b. Crown yellowish olive or brown; upper tail-coverts yellowish or ashy white ..... *vespertina* ♀ ad., p. 33.

1. Hesperiphona vespertina.

Fringilla vespertina, *Cooper*, *Ann. Lyc. N. Y.* i. p. 220 (1825); *Bp. Amer. Orn.* ii. p. 75, pl. xv. fig. 1 (1828); *Nuttall, Man. Orn.* i. p. 526 (1832); *Audub. B. Amer.* pls. 373, 424; *id. Orn. Biogr.* iv. p. 515 (1838), v. p. 235 (1839).
Loxia bonapartii, *Less. Bull. Scient.* t. xxv. (*teste Less.*).
Coccothraustes bonapartii, *Less. Ill. Zool.* pl. 31 (1831).
Coccothraustes vespertina, *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 269, pl. 68 (1831); *Jard. ed. Wilson's Amer. Orn.* iii. p. 432, pl. 15. fig. 1 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 39 (1838); *Audub. B. Amer.* iii. p. 217, pl. 207 (1841); *Gray, Gen. B.* ii. p. 358 (1844); *Scl. P. Z. S.* 1860, p. 251; *id. Cat. Amer. B.* p. 123 (1862); *Gray, Hand-l. B.* ii. p. 87, no. 7288 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Salv. Cat. Strickl. Coll.* p. 211 (1882); *id. & Godman, Biol. Centr.-Amer., Aves*, i. p. 426 (1886); *A. O. U. Check-list N. Amer. B.* p. 255 (1886).
Hesperiphona vespertina, *Bp. C. R.* xxxi. p. 424 (1850); *id. Consp.* i. p. 505 (1850); *Baird, B. N. Amer.* p. 469 (1858); *Blakist. Ibis*, 1862, p. 5, 1863, p. 69; *Baird, Ibis*, 1867, p. 266; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 550 (1869); *Cooper, B. Calif.* p. 174 (1870); *Coues, Key N. Amer. B.* p. 127 (1872); *Baird, Brewer, & Ridgway, Hist. N. Amer. B.* i. p. 449 (1874); *Coues, B. N.-West*, p. 104 (1874); *Hensh. Rep. Expl. 100th Merid.* p. 239 (1875); *Coues, Bull. Nutt. Orn. Club*, iv. p. 65 (1879); *Hay, op. cit.* vi. p. 179 (1881); *Brewster, op. cit.* vii. p. 227; *Coues, t. c.* p. 250 (1882); *McIlwraith, op. cit.* viii. p. 146 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 342 (1884); *Drew, Auk*, i. p. 15 (1884); *Scott, t. c.* p. 174; *Agersb. t. c.* p. 279; *Seton, t. c.* p. 334; *Cooke, Auk*, ii. p. 244 (1885).
Hesperiphona vespertina, var. vespertina, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 449 (1874).
Hesperiphona vespertina, var. montana, *id. t. c.* p. 449 (1874).

Adult male. General colour above brown on the back and mantle, the scapulars, lower back, and rump dull golden yellow, the latter

rather brighter; lesser wing-coverts, bastard-wing, primary-coverts, and quills black, the primaries fringed with ashy: the innermost greater coverts and secondaries pearly white fringed with yellow, the latter brown on the inner web; upper tail-coverts black, the lower ones tipped with yellow; tail-feathers black, with a shade of hoary whitish along the tip of the inner web; crown of head black as far as the occiput, the nape and hind neck like the mantle; lores, nasal plumes, and eyelid black; a broad eyebrow and band across the forehead golden yellow; ear-coverts sooty brown, as also the cheeks and chin; throat, sides of neck, and fore neck brown, more or less washed with yellow, this colour predominating gradually on the breast, abdomen, sides of body, and flanks, which are golden yellow shaded with brown; thighs blackish, tipped with yellow; under tail-coverts bright yellow; under wing-coverts and axillaries yellow, those near the edge of the wing black; quills below dusky blackish, ashy along the inner edge; "bill greenish yellow" (*Richardson*);" "bill yellow; legs and feet flesh-colour; claws brown; iris hazel" (*Audubon*). Total length 7 inches, culmen 0·8, wing 4·3, tail 2·45, tarsus 0·8.

Adult female. Lacks the black head of the male, the crown being a little darker brown than the back, the hind neck and sides of neck washed with yellow; the rump paler drab-brown; upper tail-coverts black, broadly tipped with white spots; tail-feathers black, with a large white spot at the end of the inner web; wing-coverts and quills blackish, the primaries edged with hoary white, the middle ones white at the base of the outer web, forming a speculum; secondaries plainly edged with white near the end of the outer web, the inner ones drab-brown towards the end of the outer web, the inner greater coverts similarly coloured and externally whitish washed with yellow; sides of face brown; the under surface of the body drab-brown, with a half-concealed malar streak of black; under tail-coverts white, washed with brown. Total length 5·5 inches, culmen 0·8, wing 4·2, tail 2·45, tarsus 0·8.

Young. Quite different from the adults. Brown above and below, paler and more drab on the lower back and rump; wing-coverts and quills blackish brown, the quills edged with white, broader on the secondaries, the innermost of which have also a broad white margin; the innermost greater coverts are ashy for their terminal half; the inner primaries are white at the base of the outer web, exhibiting a large alar speculum, and there is a good deal of white towards the base of the inner web also; the under wing-coverts and axillaries are primrose-yellow; under tail-coverts white; head brown like the back; upper tail-coverts black, tipped with pale drab-brown; tail-feathers black, with a spot of white at the end of the inner web, increasing in extent towards the outermost feather.

The above specimen, procured by Capt. Bendire in September, is already beginning to moult, and to show the approach of the black crown. A specimen from Mexico in the Salvin-Godman collection shows that the male *after the first* moult resembles the adult male in plumage, but has the yellow everywhere of a duller and more

greenish shade; the inner secondaries are brownish white, with a broad longitudinal centre of blackish brown, of irregular shape; the upper tail-coverts and tail are also minutely tipped with white; the yellow forehead and eyebrow are mixed with black-tipped plumes.

The differences of plumage which have induced Mr. Ridgway to recognize two forms of this species seem to me to be due to age. Several American ornithologists have also expressed their opinion that the differences recorded are due to individual variation.

A specimen from British Columbia, the sex of which has unfortunately not been ascertained by Mr. Lord, is brown with a yellowish tinge, and has black wings very much as in the adult male, but without any alar speculum, showing that it is not an old female, which in other respects it greatly resembles. It may be the young male after its first moult still retaining traces of the female plumage; but this supposition scarcely fits in with the description of the young birds given above. Altogether the changes of plumage in the present species require much further study.

Hab. Western North America east to Lake Superior, and casually to Ohio and Ontario; from the Fur Countries south into Mexico.

a. ♂ ad.; *b*. [♀] ad. sk.	British Columbia (west side of Rocky Mountains).	J. K. Lord, Esq. [P.].
c. [♂] ad. sk.	Oregon.	Lord Walsingham [P.].
d. ♂ ad. sk.	Linkville, Oregon, March 20, 1883 (*Capt. Bendire*, Sm. no. 94865).	U. S. National Museum [P.].
e. ♀ juv. sk.	Fort Klamath, Oregon, Sept. 5, 1885 (*Capt. Bendire*, Sm. no. 94869).	U. S. National Museum [P.].
f, *g*. ♂ ♀ ad.; *h*. ♂ imm. sk.	Mexico.	Salvin-Godman Coll.
i. ♀ ad. sk.	Vera Cruz, Mexico (*A. Sallé*).	Sclater Coll.
k. ♂ ad. sk.	Mexico (*A. Boucard*).	Sclater Coll.
l. ♂ ad. sk.	N. Mexico.	Sclater Coll.

2. Hesperiphona abeillæi.

Guiraca abeillii, *Less. Rev. Zool.* 1839, p. 41.

Hesperiphona vespertina, juv., *Bp. Consp.* i. p. 505 (1850).

Hesperiphona abeillii, *Bp. Consp.* i. p. 505 (1850); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 550 (1869); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 449 (1874); *Coues, Bull. Nutt. Orn. Club*, iv. p. 67, note (1879).

Coccothraustes abeillii, *Sclater, P. Z. S.* 1859, p. 365; *id. & Salv. Ibis*, 1859, p. 19; *Salv. Ibis*, 1861, p. 352; *Scl. Cat. Amer. B.* p. 123 (1862); *Gray, Hand-l. B.* ii. p. 87, no. 7289 (1870).

Coccothraustes maculipennis, *Scl. P. Z. S.* 1860, p. 251, pl. clxiii.; *Salvin, Ibis*, 1866, p. 206.

Coccothraustes abeillæi, *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 426 (1886).

Adult male. General colour above yellow, the mantle and upper

back a little more olive than the rest of the back; wing-coverts, bastard-wing, primary-coverts, and quills black, excepting the innermost greater coverts and secondaries, which are pearly white, fringed with yellow externally; upper tail-coverts black, some of the lower ones edged with yellow at the tip; tail-feathers black; crown of head, sides of head, and hind neck black, as well as the ear-coverts, cheeks, and throat; sides of neck and under surface of body from the fore neck downwards yellow; thighs black, edged with yellow; under tail-coverts, under wing-coverts, and axillaries yellow, the feathers near the edge of the wing black; quills below blackish, ashy tinged with yellow along the inner edge. Total length 7 inches, culmen 0·9, wing 4·25, tail 2·65, tarsus 0·75.

Adult female. Differs from the male in being ashy brown above, washed with olive-yellow; the black on the head confined to the crown and nape, so as to form a cap; upper tail-coverts and outer tail-feathers tipped with white; wings as in the male, but the inner primaries with a white mark at the base of the outer web, forming a speculum; sides of face and ear-coverts dull olive-greenish, the sides of the neck clearer yellow; feathers at the base of the bill and at the base of the cheeks, as well as a line along the upper chin, black; remainder of the under surface of body pale drab-brown, washed with yellow, the abdomen and under tail-coverts dull whitish; axillaries and under wing-coverts yellow, those near the edge of the wing blackish, edged with yellow. Total length 6·5 inches, culmen 0·8, wing 4·1, tail 2·5, tarsus 0·75.

The *young male* resembles the old female in having only the black cap, but the sides of the face and the upper surface of the body are brighter and more yellowish green; the white speculum is present on the wing, but is smaller than in the old female; the throat also is more ashy, and the under surface of the body more distinctly washed with yellow.

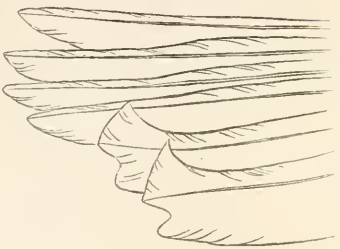
Hab. Central America from Mexico to Guatemala.

a. Ad.; *b.* Juv. st.	Mexico.	Purchased.
c. [♂ jun.] sk.	Near the City of Mexico.	Salvin-Godman Coll.
d. ♂ ad. sk.	Valley of Mexico.	Salvin-Godman Coll.
e. ♂ ad. sk.	Jalapa (*De Oca*).	Sclater Coll.
f. ♀ ad. sk.	Vera Cruz, Mexico (*A. Sallé*).	Sclater Coll. (Type of *C. maculipennis*, Scl.)
g. ♂ jun. sk.	Guatemala.	Sclater Coll.
h, i. ♂ ♀ ad. sk.	Coban, Guatemala, Aug. 1860 (*R. Owen*).	Salvin-Godman Coll.
k. ♂ ad. sk.	San Gerónimo, Guatemala, June 1882 (*R. Owen*).	Salvin-Godman Coll.
l. ♂ imm. sk.	Volcan de Fuego, Guatemala, Nov. 1861 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
m. ♂ ad. st.	Guatemala (*G. U. Skinner*).	G. U. Skinner, Esq.

8. COCCOTHRAUSTES.

Type.

Coccothraustes, *Briss. Orn.* iii. p. 218 (1760)..... C. coccothraustes.



Wing of *Coccothraustes coccothraustes*.

Range. The whole of Europe and Central Asia to North-western India; E. Siberia; Japan and Northern China.

Key to the Species.

a. With the crown tawny rufous.
  a'. With the sides of the body vinous.
    a''. Median and greater wing-coverts tipped with white ..... *coccothraustes* ♂, p. 37.
    b''. Median and greater wing-coverts tipped with pale drab ..... *japonicus* ♂, p. 40.
  b'. With the sides of the body tawny or orange-buff ..... *humii* ♂, p. 40.
b. With the crown brown ..... *coccothraustes* ♀, p. 38. / *japonicus* ♀, p. 40.
c. With the crown ashy grey ..... *humii* ♀, p. 40.

1. Coccothraustes coccothraustes.

The Common Grosbeak, *Albin, Nat. Hist. Birds*, i. p. 54, pl. lvi. (1738).

The Grosbeak or Hawfinch, *Edwards, Nat. Hist. Birds*, iv. p. 188, pl. 188 (1751).

Le Grosbec, *Briss. Orn.* iii. p. 219 (1760); *Buff. Hist. Nat. Ois.* iii. p. 444 (1775); *Daubent. Pl. Enl.* iv. pls. 99, 100.

Loxia coccothraustes, *Linn. Syst. Nat.* i. p. 299 (1766); *Penn. Brit. Zool.* p. 105, pl. 105. fig. 1 (1766); *Gm. Syst. Nat.* i. p. 844 (1788).

Hawfinch, *Lath. Gen. Syn.* ii. pt. i. p. 109 (1783).

Coccothraustes vulgaris, *Pall. Zoogr. Rosso-Asiat.* ii. p. 12 (1811); *Vieill. N. Dict. d'Hist. Nat.* xiii. p. 519 (1817); *Roux, Orn. Prov.* pl. 76 (1825); *Selby, Brit. B.* i. p. 324 (1833); *Gould, B. Eur.* iii. pl. 199 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 30 (1838); *Keys. u. Blas. Wirb. Eur.* p. xlii (1840); *Selys-Longch. Faune Belge*, p. 75 (1842); *Schl. Rev. Crit.* p. lxv (1844); *Gray, Gen. B.* ii. p. 358 (1844); *Hewits. Eggs Brit. B.* i. p. 158, pl. 43. fig. 2 (1846); *Thomps. B. Irel.* i. p. 259 (1849); *Cab. Mus. Heim.* Th. i. p. 158 (1850); *Schl. Vog. Nederl.* pl. 172 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 463 (1854); *Jaub. & Barth.-*

Lapomm. Rich. Orn. p. 113 (1859); *Salvin, Ibis*, 1859, p. 113; *Lüderm. Vög. Griechenl.* p. 63 (1860); *Powys, Ibis*, 1860, p. 137; *Schl. Dier. Nederl., Vog.* pl. 17. figs. 1, 2 (1861); *Gray, List Brit. B.* p. 92 (1863); *Wright, Ibis*, 1864, p. 51; *Filippi, Viagg. Persia*, p. 349 (1865); *Giglioli, Ibis*, 1865, p. 57; *More, t. c.* p. 128; *Lilford, Ibis*, 1866, p. 178; *Degl. & Gerbe, Orn. Eur.* i. p. 266 (1867); *Tristr. Ibis*, 1867, p. 369; *Drake, t. c.* p. 427; *Loche, Expl. Sci. Algér.* i. p. 240 (1867); *Smith, Ibis*, 1868, p. 445; *Borggr. Vogelf. Norddeutschl.* p. 77 (1869); *Doderl. Avif. Sicil.* p. 97 (1869); *Elwes & Buckley, Ibis*, 1870, p. 193; *Gray, Hand-l. B.* ii. p. 87, no. 7286 (1870); *Bettoni, Ucc. nidif. Lomb.* pl. 71; *Gould, B. Gt. Brit.* iii. pl. 40; *Fritsch, Vög. Eur.* pl. 27. fig. 8; *Saunders, Ibis*, 1871, p. 220; *Gurney, t. c.* p. 293; *Salvad. Faun. Ital., Ucc.* p. 149 (1871); *R. Gray, B. W. Scotl.* p. 144 (1871); *Harting, Handb. Brit. B.* p. 29 (1872); *Shelley, B. Egypt*, p. 150 (1872); *Keulem. Onze Vogels*, ii. pl. 47 (1873); *Brooke, Ibis*, 1873, p. 247; *Dresser, B. Eur.* iii. p. 575, pl. 175 (1875); *Lilford, Ibis*, 1875, p. 5; *Danf. & Harvie Brown, t. c.* p. 414; *Irby, B. Gibr.* p. 124 (1875); *Jesse, Ibis*, 1876, p. 303; *Newt. ed. Yarr. Brit. B.* ii. p. 98 (1876); *Danf. Ibis*, 1878, p. 25; *Bogd. B. Cauc.* p. 62 (1879); *Seeb. Ibis*, 1880, p. 187; *Gigl. Iconogr. Avif. Ital.* part ix. (1880); *Seeb. Ibis*, 1882, p. 219; *Dixon, t. c.* p. 576; *Salv. Cat. Strickl. Coll.* p. 211 (1882); *B. O. U. List Brit. B.* p. 50 (1883); *Irby, Ibis*, 1883, p. 183; *Eagle Clark, Ibis*, 1884, p. 143; *Seeb. Hist. Brit. B.* ii. p. 57 (1884); *Tristr. Faun. & Flor. Palest.* p. 66 (1884); *Radde, Orn. Cauc.* p. 179 (1884); *Whitehead, Ibis*, 1885, p. 39; *Reid, t. c.* p. 245; *Gigl. Avif. Ital.* p. — (1886).

Fringilla coccothraustes, *Meyer, Vög. Liv- u. Esthl.* p. 73 (1815); *Temm. Man. d'Orn.* i. p. 344 (1820); *Naum. Vög. Deutschl.* iv. pl. 114 (1824); *Werner, Atlas, Granivores*, pl. 36 (1827); *Crespon, Orn. Gard.* p. 240 (1840); *Nordm. in. Démid. Voy. Russ. Mérid.* iii. p. 181 (1840); *Kjærb. Danm. Fugle*, pl. xxv. fig. 1, *Suppl.* 9, fig. 6 (1852); *Sundev. Sv. Fogl.* pl. v. figs. 5, 6; *Fallon, Ois. Belg.* p. 96 (1875).

Coccothraustes deformis, *Koch, Syst. Baier. Zool.* p. 226 (1816).

Coccothraustes fagorum, *Brehm, Vög. Deutschl.* p. 256 (1831).

Coccothraustes cerasororum, *Brehm, Vög. Deutschl.* p. 256 (1831).

Coccothraustes planiceps, *Brehm, Vög. Deutschl.* p. 258 (1831).

Coccothraustes atrigularis, *Macgill. Hist. Brit. B.* i. p. 356 (1837).

Coccothraustes europæus, *Swains. Classif. B.* ii. p. 227(1837).

Coccothraustes coccothraustes, *Bp. Consp.* i. p. 506 (1850); *Licht. Nomencl. Av. Berol.* p. 46 (1854); *Sharpe, P. Z. S.* 1886, p. 96.

Coccothraustes minor, *Brehm, Naum.* 1855, p. 276; *id. Vogelf.* p. 94 (1855).

Adult male. General colour above chocolate-brown, with a broad collar of ashy grey separating the crown of the head from the mantle; lower back, rump, and upper tail-coverts cinnamon-brown, rather deeper on the latter; lesser wing-coverts blackish; median coverts ashy white with black bases; greater coverts blackish brown, externally ashy white like the median coverts, the inner ones cinnamon-brown; bastard-wing, primary-coverts, and quills velvety black, glossed with purplish or steel-blue at the ends of the inner primaries and outer secondaries, all of which have quadrate ends; primaries with a large spot of white about the middle of the inner

web; inner secondaries chocolate-brown; tail-feathers blackish, edged with brown, the centre ones cinnamon-brown externally, ashy towards the ends, which are white; the remainder blackish brown, ashy towards the end of the outer web, and broadly tipped with white on the inner; crown of head pale cinnamon-buff, inclining to chestnut on the occiput and nape; a narrow line along the forehead, lores, feathers round eye, and at base of upper mandible, and a narrow line at base of lower mandible, black; ear-coverts and cheeks cinnamon-buff; throat black, with an indistinct line of ashy whitish on either side; sides of neck ashy grey like the hind neck; rest of under surface of body from the fore neck downwards pale vinaceous brown; lower abdomen white; sides of body and flanks like the breast; thighs ashy; under tail-coverts white; under wing-coverts and axillaries white, with dusky bases to those near the edge of the wing; quills below blackish, white at base of inner web, and with a white patch on inner web of primaries; bill leaden blue, the base of the lower mandible fleshy; feet and toes greyish brown; iris white or greyish white. Total length 7 inches, culmen 0·8, wing 4·2, tail 2·15, tarsus 0·85.

The *winter plumage of the adult male* only differs from the summer plumage in having the bill fleshy white, with some distinct indications of ashy-whitish fringes to the feathers of the throat.

Individuals vary much in the depth of colour on the head, the crown being almost entirely buff in some specimens, with only the forehead cinnamon-buff. The underside of the mandible seems never to get blue like the rest of the bill in summer.

A specimen sold to the Museum by the late M. Parzudaki as *C. alpinus* seems to me to be only an ordinary *C. coccothraustes* in worn breeding-dress, with the bill blue, and the head bleached to a yellowish buff, the sides of the face, occiput, and nape being chestnut.

The *adult female* is much duller in colour than the male, and has the head ashy brown, chocolate-brown on the hinder sides of the crown, occiput, and nape; forehead and sides of faces dull ochreous brown; the remainder of the upper surface is like that of the male, except that the secondaries are edged with drab-grey, and the primaries edged with the same colour towards the tip; the under surface of the body is ochreous brown, the throat black, the sides of the body and flanks washed with vinaceous brown as in the male. Total length 6·7 inches, culmen 0·75, wing 3·9, tail 2·1, tarsus 0·75.

Young. General colour above more dingy than in the adults; the back chocolate-brown, with dusky tips, ashy bases, and whitish shaft-lines; lower back and rump paler, the feathers tipped with dusky; wings as in the old female, but with a yellowish tinge at the end of the median and greater coverts, the outermost of the latter being ashy grey externally; upper tail-coverts and centre tail-feathers pale ochreous brown, the rest blackish, washed externally with ochreous brown, with a large white spot at the tip of the inner web; crown of head olive-yellow, the feathers tipped with dusky, brighter yellow on the forehead, which has a narrow

black line across the base, the lores also blackish; ear-coverts and sides of face, as well as the cheeks, olive-yellow, with a few dusky spots along the latter; throat pale yellow; fore neck and breast, as well as the sides of the body, light brown, the feathers tipped with dusky; centre of breast and abdomen white; thighs dusky brown; under tail-coverts, under wing-coverts, and axillaries white; quills below dusky, with a white spot on the inner web of the primaries, the secondaries white at the base. Total length 6·7 inches, culmen 0·6, wing 3·8, tail 2·1, tarsus 0·8.

A *young male* has the wing of the adult male, more yellow on the head and throat than in the female, and a black throat, the feathers of the latter tipped with yellow.

Hab. Europe generally, extending eastwards to Asia Minor and the Caucasus, perhaps to Northern Persia and Turkestan, though the species from the last-named localities may prove to be *C. humii*.

a. ♀ ad. st.	Norfolk.	Lord Walsingham [P.].
b, *c*. ♂ ♀ ad.; *d*, *e*, *f*, *g*. Juv. st.	Norfolk.	Lord Walsingham [P.].
h. Pull. sk.	Norfolk.	Lord Walsingham [P.].
i, *k*. Juv. st.	Cambridgeshire.	Mr. J. Baker [C.].
l, *m*. ♂ ♀ ad. st.	Turnham Green, Middlesex.	Mr. J. Baker [C.].
n, *o*. ♂ ♀ ad. st.	Hampstead, Middlesex (*O. S.*).	Salvin-Godman Coll.
p, *q*. ♂ ad.; *r*, *s*. ♀ ad. st.	Cookham, Berkshire.	Mr. W. Briggs [P.].
t, *u*. ♂ ♀ ad. sk.	Cookham, Berkshire (*J. G.*).	Gould Coll.
v. Juv. sk.	Cookham, Berkshire (*J. G.*).	Gould Coll.
w. ♂ ad. sk.	Cookham, Berkshire, Dec. 10, 1867 (*R. B. S.*).	R. B. Sharpe, Esq.
x. ♂ ad. sk.	Cookham, Berkshire, Jan. 20, 1873 (*R. B. S.*).	R. B. Sharpe, Esq.
y. ♂ ad. sk.	Maidenhead, Feb. 10, 1880 (*J. G.*).	Gould Coll.
z. ♀ ad. sk.	Maidenhead, May (*J. G.*).	Gould Coll.
a'. ♂ ad. sk.	Belgium.	Gould Coll.
b', *c'*. ♂ ♀ ad. sk.	Vosges Mountains, Jan 1877 (*Mougel*).	E. Hargitt, Esq. [P.].
d'. ♂ ad. sk.	[France.]	M. Parzudaki [s. n. *C. alpinus*.]
e'. ♂ juv. sk.	Denmark (*Kjærbölling*).	Gould Coll.
f', *g'*. ♂ ♀ ad. sk.	Taurus, Asia Minor, Dec. (*C. G. Danford*).	Salvin-Godman Coll.
h'. ♀ ad. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll.

Subsp. *a*. Coccothraustes japonicus.

Coccothraustes vulgaris, pt., *Pall. Zoogr. Rosso-Asiat.* ii. p. 12 (1811).
Coccothraustes vulgaris japonicus, *Temm. & Schl. Faun. Jap.* pl. 51 (1850); *Swinh. P. Z. S.* 1871, p. 386; *Blakist. & Pryer, B. Japan*, p. 175 (1882); *Jouy, Proc. U. S. Nat. Mus.* vi. p. 294 (1883); *Blakist. Amended List B. Japan*, p. 18 (1884); *Seebohm, Hist. Brit. B.* ii. p. 57 (1884).

Coccothraustes japonicus, *Bp. Consp.* i. p. 506 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 463 (1856); *Gray, Hand-l. B.* ii. p. 87, no. 7287 (1870); *Swinh. Ibis*, 1874, p. 160; *Tacz. J.f. O.* 1874, p. 331; *Swinh. Ibis*, 1875, p. 121; *Tacz. Bull. Soc. Zool. France*, i. p. 181 (1876); *Blakist. & Pryer, Ibis*, 1878, p. 245; *Tacz. Bull. Soc. Zool. France*, 1879, p. 138; *Sharpe, P. Z. S.* 1886, p. 97.

Coccothraustes vulgaris, *Middend. Sibir. Reis.* p. 154 (1851); *Schrenck, Reis. Amurl.* p. 300 (1859); *Swinh. Ibis*, 1861, p. 336; *Blakist. Ibis*, 1862, p. 328; *Radde, Reis. Sibir., Vög.* p. 193 (1863); *Whitely, Ibis*, 1863, p. 193; *Dybowski, J. f. O.* 1868, p. 335; *Swinh. P. Z. S.* 1870, p. 448; *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871); *id. & Oust. Ois. Chine*, p. 348 (1877).

Adult male. Only differs from the same sex of *C. coccothraustes* in having the wing-coverts ashy whitish or pale drab at the ends instead of whitish: "bill horn-colour; legs and toes flesh-colour" (*H. Whitely*). Total length 6·5 inches, culmen 0·8, wing 3·85, tail 2.

Adult female. Differs like the male from the corresponding sex of *C. coccothraustes*. Total length 7 inches, culmen 0·8, wing 4·1, tail 2·1, tarsus 0·85.

Hab. Eastern Siberia and Japan, extending into Northern China as far west as the Ichang gorge, according to the late Consul Swinhoe; Mongolia and Thibet (*A. David*).

a. ♀ ad. sk.	Japan.	India Museum.
b, c. ♂ ♀ ad. sk.	Japan.	Gould Coll.
d. ♀ ad. sk.	Yokohama, Japan.	Prof. Milne [C.].
e. ♀ ad. sk.	Nagasaki, Japan.	F. Ringer, Esq. [P.].
f. ♀ ad. sk.	China.	J. R. Reeves, Esq. [P.].
g. Ad. sk.	Chusan (*Capt. Ince*).	Gould Coll.

2. Coccothraustes humii. (Plate I.)

Coccothraustes vulgaris (*nec L.*), *Hume, Ibis*, 1869, p. 456; *id. Str. F.* vii. pp. 413, 462 (1877), viii. p. 108 (1879); ? *Barnes, Str. F.* ix. p. 456 (1880).

Coccothraustes humii, *Sharpe, P. Z. S.* 1886, p. 97.

Adult male. Differs from *C. coccothraustes* in its paler coloration, and in the side of the body being pale tawny or orange-brown instead of vinaceous. Total length 6·9 inches, culmen 0·8, wing 3·8, tail 2·1, tarsus 0·8.

Adult female. Differs from the female *C. coccothraustes* in being ochreous-brown above, pale ashy ochreous on the lower back, rump, and upper tail-coverts; crown of head ashy grey like the hind neck; sides of face also ashy grey, washed with ochreous; breast and sides of body ochreous buff, instead of vinaceous brown; centre of breast and abdomen white. Total length 6·75 inches, culmen 0·75, wing 3·9, tail 2·35, tarsus 0·8.

Hab. North-western Punjab; ? Afghanistan.

a, b. ♂ ad. sk.	Attock, N.W. Punjab, March 1869 (*Col. Delmé Radcliffe*).	Hume Coll. (Types of species.)
c. ♀ ad. sk.	Attock, Feb. 1870 (*D. R.*).	Hume Coll.

9. MYCEROBAS.

Type.

Mycerobas, *Cab. in Wiegm. Arch.* xiii. p. 350 (1847)..... M. melanoxanthus.

Bill of *Mycerobas melanoxanthus* from below, to show form of chin-angle.

Range. Throughout the Himalayas to Manipur and Western China.

1. Mycerobas melanoxanthus.

Coccothraustes melanoxanthus, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 279. figs. 1, 2 (nos. 326, 327), pl. 279 A. figs. 1, 1*; *id. Asiatic Researches*, xix. p. 150 (1836); *id. in Gray's Zool. Misc.* p. 84 (1844).

Coccothraustes fortirostris, *Lafr. Rev. Zool.* 1840, p. 228.

Coccothraustes melanoxanthus, *Blyth, J. A. S. Beng.* xiii. 1844, p. 950, cum fig. 3 (bill); *Gray, Gen. B.* ii. p. 358, pl. 88 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 105 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 125 (1849); *Gray, Hand-l. B.* ii. p. 88, no. 7295 (1870); *David, N. Arch. Mus.* vii. *Bull.* p. 11 (1871); *Salvin, Cat. Strickl. Coll.* p. 212 (1882).

Mycerobas melanoxanthus, *Cab. in Wiegm. Arch. f. Naturg.* xiii. p. 350 (1847); *Bp. Consp.* i. p. 505 (1850); *Gould, B. Asia*, vol. v. pl. 20 (1851); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 461 (1850); *Jerd. B. Ind.* ii. p. 386 (1863); *Blyth, Ibis*, 1867, p. 43; *Swinh. P. Z. S.* 1871, p. 386; *David & Oust. Ois. Chine*, p. 345 (1878); *Hume, Str. F.* 1879, p. 107; *C. H. T. Marshall, Ibis*, 1884, p. 420.

Adult male. General colour above slaty black, the feathers black in the centre with slaty-grey margins; lesser wing-coverts like the back; remainder of the coverts black, greater coverts edged with slaty grey, the inner ones tipped with a pale sulphur-yellow spot on the outer web; bastard-wing, primary-coverts, and quills black, edged with ashy brown, the secondaries with a small mark of pale yellow at the end of the outer web, larger and more sulphur-yellow on the inner secondaries; the inner primaries with a concealed white spot at the base; upper tail-coverts and tail-feathers black; head, sides of face, and entire throat black; remainder of under surface of body, from the fore neck downwards, bright yellow; sides of body spotted with black, the lower flanks edged with black; thighs black, edged with yellow; under tail-coverts yellow; under wing-coverts and axillaries black, edged with yellow; quills below

black, ashy along the inner edge, whitish towards the base: "bill leaden blue; feet leaden grey, claws brown; iris brown" (*B. H. Hodgson*). Total length 8·5 inches, culmen 1, wing 5·05, tail 3, tarsus 0·85.

The bill in the male certainly gets darker in summer.

Adult female. Different from the male. General colour above black, mottled with yellow, the feathers being edged with yellow, those of the mantle and upper back being yellow with a black spot in the centre; wing-coverts black, edged with yellow, more broadly on the median and greater coverts, which are white towards the end of the outer web; bastard-wing, primary-coverts, and quills black, edged with dull olive-yellow, clearer on the primaries, which are white at the extreme base of the outer web, forming a small speculum; the inner secondaries more broadly edged with yellow, white towards the ends, resembling the inner greater coverts; upper tail-coverts and tail-feathers black, edged with dull yellow; crown of head black, varied with whitish bases and yellow edges to the feathers; lores and a distinct eyebrow yellow, the latter posteriorly streaked with black; feathers round eye and a broad streak along the upper ear-coverts black, followed by a broad band of yellow, the fore part of the cheeks with a broad black streak from the angle of the mouth; the hinder cheeks yellow, streaked with black like the sides of neck; throat yellow, separated by a black malar band from the cheeks; remainder of under surface yellow, streaked with black mesial spots, except on the abdomen, which is uniform yellow; sides of body and flanks like the breast, the black spots a little smaller; thighs black, edged with yellow; under tail-coverts yellow; under wing-coverts black, edged with yellow, the lower ones ashy whitish, washed with yellow and centred with black; axillaries yellow; quills below dusky, ashy along the inner edge, whitish towards the base of the inner web: "bill, legs and feet, and iris as in the male, but duller" (*B. H. Hodgson*). Total length 7 inches, culmen 1, wing 5, tail 2·7, tarsus 0·85.

Young male. Resembles the old female, but is whiter below, and has the spots much smaller and more linear, the throat and fore neck having a reddish tinge. One procured by Capt. Unwin on the 4th of May is commencing to moult into the black and yellow plumage of the adult, and another specimen, shot by Col. Delmé Radcliffe in September, has all but completed its moult. Mr. Hodgson states that the young males retain the plumage of the female till after the second moult, taking the adult plumage gradually.

Hab. Throughout the Himalayas from the far North-west to Sikhim, and ranging into Manipur in winter, and also occurring in the wooded mountains of Western Szechuen in Western China.

a, b. ♂ ♀ ad.; *c, d.* ♂ imm. sk.	Thundiani, Hazara, Sept. 1870 (*Col. Delmé-Radcliffe*).	Hume Coll.
e. ♂ juv. sk.	Abbotabad, Hazara, May 4, 1871 (*W. W. Unwin*).	Hume Coll.
f. ♂ ad. sk.	Chamba, Feb. 21, 1881 (*C. H. T. Marshall*).	Hume Coll.
g. Juv. sk.	Chamba, Feb. 1882.	Colonel C. H. T. Marshall [P.].

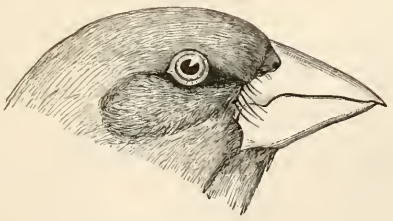
h, *i*. ♂ ad. sk.	Kotegurh, April 1871.	Hume Coll.
k. ♂ ad. sk.	Simla, 1869.	Hume Coll.
l, *m*. ♂ ad. sk.; *n*, *o*. ♀ ad. sk.	Between Simla and Masuri.	Capt. Stackhouse Pinwill [P.].
p. ♂ ad.; *q*. ♀ imm. sk.	Masuri, March 1869.	Hume Coll.
r. ♂ ad. sk.	Middle range of hills north of Masuri.	Hume Coll.
s, *t*. ♀ ad.; *u*. Juv. sk.	Kumaon.	Hume Coll.
v, *w*. Juv. sk.	Nepal (*Hodgson*).	India Museum.
x, *y*, *z*. ♂ ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
a'–*e'*. ♀ ad. et juv. sk.	Nepal.	Hodgson Coll.
f', *g'*. ♂; *h'*. ♀ ad.; *i'*. Juv. sk.	Native Sikhim, Jan. 1873–76 (*L. Mandelli*).	Hume Coll.
k'. ♂ ad. sk.	Native Sikhim, Feb. 1875 (*L. M.*).	Hume Coll.
l', *m'*. ♀ ad.; *n'*, *o'*. Juv. sk.	Native Sikhim, May 1873–75 (*L. M.*).	Hume Coll.
p'. ♂ ad. sk.	Native Sikhim, Oct. 1878 (*L. M.*).	Hume Coll.
q'. ♂ ad. sk.	Native Sikhim, Dec. 1878 (*L. M.*).	Hume Coll.
r', *s'*, ♂; *t'*. ♀ ad. sk.	Interior of Sikhim, Aug. 1873 (*L. M.*).	Hume Coll.
u'. ♂ ad.; *v'*, *w'*. Juv. sk.	Sikhim, Feb. 1873 (*L. M.*).	Hume Coll.
x'. ♂ ad. sk.	Sikhim, Aug. 18, 1879 (*L. M.*).	Hume Coll.
y', *z'*. Juv. sk.	Sikhim.	Hume Coll.
α. ♀ ad. sk.	Sikhim (*W. E. Brooks*).	Hume Coll.
β, *γ*, *δ*, *ε*. ♂ ad.; *ζ*, *η*. ♀ ad.; *θ*, *ι*, *κ*. Juv. sk.	Darjiling.	Hume Coll.
λ, *μ*. ♂ ♀ ad. st.	Darjiling.	Hume Coll.
ν. ♀ ad. sk.	Limatol, Manipur, May 29, 1881 (*A. O. H.*).	Hume Coll.

10. PYCNORHAMPHUS.

Type.

Hesperiphona (pt.), *auct.*

Pycnorhamphus, *Hume, Nests and Eggs Ind. B.* p. 409 (1873) .... P. icteroides.



Head of *Pycnorhamphus carneipes*.

Range. Throughout the Himalayas, extending into Thibet and Western China.

Key to the Species.

a. With no alar speculum.
  a'. Crown and throat black, as also the wings and tail.
    a''. Thighs black .. .. *icteroides* ♂, p. 44.
    b''. Thighs yellow..... ..... *affinis* ♂, p. 46.
  b'. Crown and throat grey.
    c''. Under surface from the fore neck downwards olive-yellow ..... *affinis* ♀, p. 46.
    d''. Throat and chest ashy grey; rest of under surface pale fawn-colour..... ..... *icteroides* ♀, p. 44.
b. With a white alar speculum on the primaries.
  c'. Throat and breast blackish like the head .. *carneipes* ♂, p. 48.
  d'. Throat and breast ashy grey, streaked with dull white..... *carneipes* ♀, p. 48.

1. Pycnorhamphus icteroides.

Coccothraustes icteroides, *Vigors, P. Z. S.* 1830, p. 8; *Gould, Cent. B. Himal. Mts.* pl. 45 (1832); *Blyth, J. A. S. Beng.* xiii. 1844, p. 950, cum fig. (bill); *Gray, Gen. B.* ii. p. 358 (1844); *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 281 (no. 829); *id. in Gray's Zool. Misc.* p. 84 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 105 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 125 (1849); *Gray, Hand-l. B.* ii. p. 88, no. 7290 (1870); *Salvin, Cat. Strickl. Coll.* p. 212 (1882).

Mycerobas icteroides, *Cab. in Wiegm. Arch. f. Naturg.* xiii. p. 350 (1847).

Hesperiphona icteroides, *Bp. Consp.* i. p. 505 (1850); *Gould, B. Asia*, v. pl. 22* (1851); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 462 (1856); *Jerd. B. Ind.* ii. p. 385 (1863); *Hume & Henderson, Lahore to Yark.* p. 257 (1873); *Cock & Marshall, Str. F.* 1873, p. 358; *Wardlaw Ramsay, Ibis*, 1880, p. 66; *C. H. T. Marshall, Ibis*, 1884, p. 420.

Pycnorhamphus icteroides, *Hume, Nests and Eggs Ind. B.* p. 469 (1873); *id. Str. F.* 1879, p. 107.

Adult male. General colour above yellow, the centre of the back yellow, the feathers yellow on the outer web, black on the inner one; scapulars, entire wings, upper tail-coverts, and tail black; crown of head and nape, sides of head, cheeks, and throat black; rest of under surface from the lower throat yellow; thighs black; axillaries and under wing-coverts black; quills black below, a little browner on the edge of the inner web: "bill apple-green; legs carneous; iris reddish brown" (*R. G. Wardlaw Ramsay*). Total length 8 inches, culmen 1, wing 5, tail 3·2, tarsus 1·05.

Adult female. Different from the male. General colour above ashy grey, the head a little duller than the back; lower back and

* Excepting the lower figure, which is *H. affinis* ♀.

rump a pale sandy buff slightly washed with ashy; upper tail-coverts ashy grey: wing-coverts ashy grey, the greater series black internally; bastard-wing, primary-coverts, and quills black, slightly edged with ashy near the end of the outer web, the secondaries broadly edged with ashy grey: tail black, except the centre feathers, which are ashy grey with black shafts; crown of head, sides of face, sides of neck, throat, and chest ashy grey; breast and abdomen, as well as the under tail-coverts, fawn-buff; thighs ashy; under wing-coverts and axillaries ashy grey; quills blackish below, browner on the inner web: "bill greyish blue, yellowish at the tip and on the edges; legs and feet pale fleshy: iris brown" (*A. O. Hume, MSS.*). Total length 8·5 inches, culmen 0·95, wing 5·1, tail 3·55, tarsus 1.

Young male. Resembles the adult female, but with the yellow rump and black wings and tail of the adult male; the back interspersed with many black feathers; the fawn-coloured under surface rather brighter than in the adult male, the feathers of the fore neck and chest obscured with dusky tips; throat ashy grey, as in the old female, but mottled with the black feathers of the approaching adult plumage: "bill waxy green; legs and feet pale fleshy; iris hazel. Total length 9·2 inches, wing 5, tail 3·4, tarsus 1·15, bill from gape 0·78." (*C. T. Bingham.*)

No perceptible difference is observable between specimens killed in winter and summer, excepting that the bill is much paler in the former season, when it is more yellowish with less blue in both mandibles. A male killed near Simla, on Sept. 11, according to Mr. Hume, had the "legs yellowish fleshy" and the bill "pale horny greenish;" and a second male from Simla, procured on the 8th of October, also had the bill "horny greenish," but the legs were fleshy pink and the "irides reddish brown."

Old males often have the yellow on the hind neck intensified into orange, and this deeper tint also occasionally pervades the fore neck and chest. The yellow on the back is so arranged that it forms a continuous streak down the mantle, but on examination the feathering will be found to be particoloured, the exterior portion being black, the inner portion yellow.

Hab. Himalayas, "breeding in the pine-forests south of the first snowy range and west of the Ganges, from 5000 to 9000 feet" (*A. O. Hume*).

a. ♀ ad. sk.	[Himalayas.]	Zoological Society. (Type of the species.)
b, c. ♂ ♀ ad. sk.	Ruttun Pir, Cashmere, May 10, 1871 (*W. E. Brooks*).	Hume Coll.
d. ♀ ad. sk.	Gulmurg, June 6, 1871 (*W. E. Brooks*).	Hume Coll.
e, f. ♂ ♀ ad. sk.	Dhurmsala, May 1870.	Hume Coll.
g, h. ♂ ♀ ad. sk.	Above Dhurmsala.	Capt. Stackhouse Pinwill [P.].
i, j. ♂ ♀ ad. sk.	Between Dhurmsala and Chamba.	Capt. Stackhouse Pinwill [P.].

k, l. ♂ ♀ ad. sk.	Chamba, 3300 feet, Jan. 1880 (*C. H. T. Marshall*).	Hume Coll.
m. ♀ ad. sk.	Murree, March 27, 1873.	Hume Coll.
n, o. ♂ ad.; *p.* ♀ ad. sk.	Murree, May, 1872–73.	Hume Coll.
q. ♂ ad. st.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
r. Juv. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
s, t, u. ♂ ad. sk.	Kotegurh, near Simla.	Hume Coll.
v, w. ♂ ad. sk.	Kotegurh, Dec. 1868.	Hume Coll.
x. ♂ ad. sk.	Kotegurh, April 1871.	Hume Coll.
y. ♀ ad. sk.	Duwaulee, in Kotekhaie, Feb. 21, 1871.	Hume Coll.
z. ♀ ad. st.	Duwalee, Feb. 21, 1871.	Hume Coll.
a', b'. ♂ ♀ ad. sk.	Fagoo, near Simla.	Hume Coll.
c'. ♂ ad. sk.	Fagoo, Sept. 11, 1868 (*A. O. H.*).	Hume Coll.
d'. ♂ ad. sk.	Near Simla, Oct. 8, 1868 (*A. O. H.*).	Hume Coll.
e'. ♀ ad. sk.	Mahasu, near Simla, Aug. 15, 1868 (*A. O. H.*).	Hume Coll.
f'. ♂ juv. sk.	Mashobra, Aug. 5, 1876 (*C. T. Bingham*).	Hume Coll.
g'. ♂ ad. sk.	Bunkooti, near Simla, April 11, 1869.	Hume Coll.
h'. ♂ ad. sk.	Middle range of hills north of Masuri.	Hume Coll.

2. Pycnorhamphus affinis.

Hesperiphona affinis, *Blyth, J. A. S. Beng.* xxiv. p. 179 (1855); *Jerd. B. Ind.* ii. p. 385 (1863); *Blyth, Ibis*, 1867, p. 43; *Gould, B. Asia*, v. pl. 23 (1868); *David & Oust. Ois. Chine*, p. 345 (1878).

Coccothraustes affinis, *Gray, Hand-l. B.* ii. p. 88, no. 7291 (1870); *David, N. Arch. Mus.* vii. *Bull.* p. 11 (1871).

Pycnorhamphus affinis, *Hume, Nests and Eggs Ind. B.* p. 469, note (1873); *id. Str. F.* 1879, p. 107.

Adult male. General colour above black and orange; hind neck and upper mantle, lower back and rump orange-yellow; scapulars and centre of back black, streaked down the centre of the back with orange-yellow, the feathers being mostly black on the inner web, yellow on the outer one; entire wing, upper tail-coverts, and tail black; crown of head and nape, sides of head and throat black; remainder of the under surface bright yellow, including the thighs; under wing-coverts and axillaries black; quills black below, browner along the inner web. Total length 9 inches, culmen 1, wing 5·05, tail 3·5, tarsus 1·05.

Adult female. Different from the male. General colour above dark olive-greenish; the hind neck, lower back, rump, and upper tail-coverts dull olive-yellow; wing-coverts dark olive-yellow, a little lighter towards the end of the greater coverts; bastard-wing black,

edged with ashy olive; primary-coverts and quills black, the secondaries externally olive-yellow, greyish towards the ends of the outer webs; tail-feathers black; crown of head, ear-coverts, cheeks, and throat dark ashy grey, paler on the latter; sides of neck and remainder of under surface from the fore neck downwards olive-yellow, a little greener on the sides of body and flanks; thighs and under tail-coverts olive-yellow with a greenish tinge; under wing-coverts and axillaries dark ashy, edged with dull olive-yellow; quills below blackish, more ashy along the inner edge. Total length 8·3 inches, culmen 0·85, wing 4·85, tail 3·5, tarsus 1·05.

The adult males vary in the depth of colour on the hind neck and lower back and rump, which is much more orange in some than in others, the richly tinted birds being no doubt the older ones.

A young male in the Hume collection, procured by Mr. Mandelli in Aug. 1873, has the head more sooty black, the hind neck paler orange-yellow, much less yellow in the centre of the back, the feathers of which part have narrow yellow fringes; otherwise the rest of the upper surface is black and yellow, as in the fully adult bird. Underneath the colour is dull saffron-yellow, the sides of the face being brown as well as the throat, mixed with black.

Hab. Eastern Himalayas and adjoining portions of Thibet, ranging into Moupin in Western China. Capt. Pinwill's collection contains several examples from the North-western Himalayas, and one specimen is marked from "Dhurmsala," but we are not aware of any other naturalist having found it in the north-west.

a. ♂ ad. sk.	Dhurmsala.	Capt. Stackhouse Pinwill [P.].
b, *b'*. ♂; *c*. ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
d. Ad.; *e*. Juv. sk.	Nepal.	Hodgson Coll.
f. ♂ ad. sk.	Native Sikhim, Jan. 1874 (*L. Mandelli*).	Hume Coll.
g. ♀ ad. sk.	Native Sikhim, April 1875 (*L. M.*).	Hume Coll.
h. ♂ ad. sk.	Native Sikhim, 12000 feet (*L. M.*).	Hume Coll.
i, *k*. ♂ ad. et juv. sk.	Interior of Sikhim, Aug. 1873 (*L. M.*).	Hume Coll.
l, *m*. ♂ ad. sk.	Interior of Sikhim, June 1874 (*L. M.*).	Hume Coll.
n, *o*, *p*. ♂; *q*, *r*. ♀ ad. sk.	Darjiling.	Hume Coll.
s. ♂ ad. sk.	Sikhim.	Hume Coll.
t. ♀ ad. sk.	Thibet, Aug. 1874 (*L. Mandelli*).	Hume Coll.
u. ♂ ad. sk.	Himalayas.	Gould Coll.

3. Pycnorhamphus carneipes.

Coccothraustes carneipes, *Hodgs. Icon. ined. in Brit. Mus.*, *Passeres*, pl. 279 A. fig. 2 (no. 328), pl. 280. figs. 1, 2; *id. Asiat. Research.* xix. p. 151 (1836); *id. in Gray's Zool. Misc.* p. 84 (1844); *Blyth*,

J. A. S. Beng. xiii. p. 950 (1844); *Gray, Gen. B.* ii. p. 358 (1844); *id. Cat. Mamm. etc. Nepal Coll. Hodgs.* p. 105 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 125 (1849); *Gray, Hand-l. B.* ii. p. 88, no. 7292 (1870); *Dresser, Ibis,* 1875, p. 241; *Salv. Cat. Strickl. Coll.* p. 212 (1882).

Coccothraustes speculigerus, *Brandt, Bull. Sci. Acad. St. Pétersb.* ix. p. 11 (1842); *Severtz. Turkest. Jevotn.* p. 64 (1873).

Hesperiphona speculigera, *Bp. Consp.* i. p. 506 (1850).

Loxia albispecularis (of dealers), *teste Bp. l. c.* (cf. also *Salvin, Cat. Strickl. Coll.* p. 212).

Mycerobas carneipes, *Gould, B. Asia,* vol. v. pl. 21 (1851); *Horsf. & Moore, Cat. Birds E.I. Co. Mus.* ii. p. 462 (1856); *Jerd. B. Ind.* ii. p. 387 (1863); *Prjevalski, in Rowley's Orn. Misc.* ii. p. 296 (1877): *Wardlaw Ramsay, Ibis,* 1879, p. 448, 1880, p. 66; *Biddulph, Ibis,* 1881, p. 81; *Scully, t. c.* p. 577.

Pycnorhamphus carneipes, *Hume, Str. F.* viii. p. 108 (1879).

Adult male. General colour above sooty black; the lower back and rump olive-yellow; wing-coverts black, the greater coverts with a spot of olive-yellow at the end of the outer web; bastard-wing and primary-coverts black; quills black, the primaries edged with ashy grey and white at the base of the outer web, forming a large speculum; the inner secondaries with a spot of olive-yellow at the end of the outer web, tinged with ashy; upper tail-coverts black, fringed at the tips with olive-yellow; tail-feathers black; crown of head, sides of face, throat, and breast sooty black like the back; abdomen, sides of body, and flanks olive-yellow; thighs dark ashy grey; under tail-coverts olive-yellow; under wing-coverts and axillaries ash-grey, slightly fringed with olive-yellow; quills below black, ashy along the inner edge: "upper mandible brownish, the lower one whitish horn-colour; legs pale fleshy brown; iris hair-brown" (*Wardlaw Ramsay*). Total length 8·5 inches, culmen 0·85, wing 4·65, tail 3·75, tarsus 1.

Adult female. Different from the male. General colour above dark slaty grey, the feathers of the back slightly mottled with dusky centres; lower back and rump olive-yellow; lesser and median coverts black, edged with ashy olive, yellower on the latter; greater coverts black, edged with olive-yellow, the inner ones broadly tipped with the latter colour; bastard-wing and primary-coverts black, fringed with ashy; quills blackish, edged with olive-yellow, the inner secondaries with a spot of olive-yellow washed with ashy at the end of the outer web; the primaries with white bases to the outer web, forming a large alar speculum; upper tail-coverts dark olive-yellow, with blackish shaft-streaks; tail-feathers black, edged with olive-yellow; crown of head like the back; lores and a slight streak over the eye ashy, with whitish shaft-streaks: eyelid whitish; ear-coverts and cheeks blackish, streaked with white shaft-lines, very distinct below the eye; the cheeks greyer, blacker on the malar line; throat and under surface of body dark slaty grey, with a few whitish shaft-lines on the throat and fore neck; abdomen paler ashy; flanks olive-yellow: thighs ashy grey: under tail-coverts olive-yellow, with ashy bases; under wing-coverts and axil-

laries light slaty grey, edged with ashy whitish; quills below dusky, ashy along the inner edge. Total length 7·5 inches, culmen 0·8, wing 4·4, tail 4, tarsus 1.

Young male. Resembles the old female in general appearance, but is brighter olive-yellow on the abdomen and flanks as well as on the rump; the upper surface is distinctly washed with olive, and is paler than in the old female; the throat and breast are thickly spotted with dull white centres to the feathers.

The bird described was obtained by Colonel Biddulph at Gilgit on the 27th of June, and is already moulting. From other specimens in the Hume collection, it is evident that the young male moults in its first winter into a plumage only a little darker than that of the old female, and that it does not gain the fully adult dress for some time. Colonel Biddulph found males breeding in June and July which were still in the female plumage, which, he thinks, "is not doffed till after the first breeding-season."

The white streaks on the breast of the old females are much more developed in some specimens than in others, and the difference in size of bill in a series is very remarkable.

Hab. Altái Mountains; Turkestan; Afghanistan, and throughout the Himalayas, from 6000 to 8000 feet, seldom coming lower, even in winter, according to Colonel Biddulph. Extends eastwards to the Ala-shan Mountains, Kansu, and the mountains of South Kokonoor. It may extend as far westwards as Lenkoran, if this locality is intended for the "mountains of Northern Persia," recorded by Prof. Brandt (*l. c.*).

a. ♂ ad. sk.	Above Dhurmsala.	Capt. Stackhouse Pinwill [P.].
b, *c*. ♂; *d*. ♀ ad. sk.; *e*. ♂ juv. sk.	Gilgit, June 1829 (*J. Biddulph*).	Hume Coll.
f. ♂ ad. sk.	Middle range of hills north of Masuri.	Hume Coll.
g. ♂ ad.; *h*, *i*. ♀ ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
k. Juv. sk.	Nepal (*B. H. Hodgson*).	India Museum.
l. ♂ ad.; *m*, *n*, *o*. ♀ ad.; *p*. ♂ juv. sk.	Native Sikhim, March 1873–74 (*L. Mandelli*).	Hume Coll.
q. ♂ ad.; *r*, *s*. ♀ ad. sk.	Native Sikhim, April 1875 (*L. Mandelli*).	Hume Coll.
t. ♂ ad. sk.	Native Sikhim, July 1878 (*L. Mandelli*).	Hume Coll.
u. ♂ juv. sk.	Native Sikhim, Oct. 1879 (*L. Mandelli*).	Hume Coll.
v, *w*. ♂ ♀ ad. sk.	Native Sikhim, Nov. 1879 (*L. Mandelli*).	Hume Coll.
x, *y*. ♂ ♀ ad.; *z*. ♂ juv. sk.	Interior of Sikhim, Oct. 1873 (*L. Mandelli*).	Hume Coll.
a'. ♀ ad. sk.	Interior of Sikhim, Feb. 1873 (*L. Mandelli*).	Hume Coll.
b'. ♀ ad. sk.	Sikhim, April 1873 (*L. Mandelli*).	Hume Coll.

c', *d'*. ♂ ad.; *e'*, *f'*. ♀ ad. sk.	Sikhim, Aug. 1, 1879 (*L. Mandelli*).	Hume Coll.
g', *h'*. ♂ ♀ ad. sk.	Sikhim, Oct. 1872 (*L. Mandelli*).	India Museum.
i', *k'*, *l'*. ♂ ad.; *m'*, *n'*, *o'*, *p'*. ♀ ad. sk.	Sikhim, 1872 (*J. Gammie*).	India Museum.
q'. ♂ ad. sk.	Darjiling, winter of 1869–70 (*H. J. Elwes*).	India Museum.
r'. ♂ ad.; *s'*. imm. sk.	Darjiling.	India Museum.
t'. ♂ ad. sk.	Thibet, Apr. 1875 (*L. Mandelli*).	India Museum.

11. PHEUCTICUS *.

Pheucticus, *Reichenb. Syst. Nat.* Taf. lxxviii. fig. 15 (1850) ..... Typo haud indicato.

Bill of *Pheucticus chrysopeplus* from below, to show chin-angle.

Range. Central America, from Mexico to Panama, and thence through Colombia, Ecuador, and Peru to Salta in the Argentine Republic.

Key to the Species.

a. Head golden yellow; thighs yellow; tail tipped with white.
  a'. Larger: primaries edged with white ..... *chrysopeplus*, p. 51.
  b'. Smaller: no white edging to the primaries *chrysogaster*, p. 52.

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* Bonaparte described in 1837 a *Guiraca magnirostris*, which in 1850 he referred with doubt to the genus *Pheucticus*; but it is so badly diagnosed that I have not been able to identify the species, nor has Mr. Salvin been able to make it out. As Swainson had already described a *Guiraca magnirostris*, Bonaparte's name became untenable, and in 1869 Count Salvadori re-named the species *Pheucticus bonapartii*, which name it will bear when any one is able to identify it. The synonymy is as follows:—

Pheucticus bonapartii.

Guiraca magnirostris, *Bp. P. Z. S.* 1837, p. 120 (*nec Swains.*).
Coccoborus magnirostris, *Bp. Consp.* i. p. 504 (1850); *cf. Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 334, note (1884).
Goniaphea magnirostris, *Gray, Hand-l. B.* ii. p. 104, no. 7549 (1870).
Pheucticus bonapartii, *Salvad. Atti R. Accad. Sci. Torino*, iv. p. 178 (1869).

b. Head golden yellow; thighs black; tail entirely black ..... *tibialis*, p. 53.
c. Head black like the back.
c'. Rump black ..... *aureiventris*, p. 54.
d'. Rump yellow, varied with black.
a''. Throat black ..... *uropygialis*, p. 55.
b''. Throat yellow ..... *crissalis*, p. 56.

1. Pheucticus chrysopeplus.

Coccothraustes chrysopeplus, *Vigors*, *P. Z. S.* 1832, p. 4.
Pitylus chrysopeplus, *Gray*, *Gen. B.* ii. p. 362 (1844).
Coccoborus chrysopeplus, *Bp. Consp.* i. p. 504 (1850).
Pheucticus chrysopeplus, *Cab. Mus. Hein.* Th. i. p. 153, note (1850); *Finsch*, *Abhandl. nat. Ver. Bremen*, ii. p. 339 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Lawr. Mem. Bost. Soc. Nat. Hist.* ii. p. 274 (1874); *Salvin & Godman*, *Biol. Centr.-Amer.*, *Aves*, i. p. 135 (1884).

Adult male. General colour above deep golden yellow, the feathers of the mantle more or less black on the outer web; scapulars black, margined at the tip with dull yellowish; lesser wing-coverts black, with a patch of golden yellow along the bend of the wing; median coverts black, with a broad white spot at the tip; greater series black, tipped with white, mostly confined to the outer web; bastard-wing and primary-coverts black; quills black, the primaries white at base, the secondaries with a spot of white at the end of the inner web; upper tail-coverts black, spotted with white at the ends; tail-feathers black, fringed with ashy white at the tips, the three outer ones with a large white mark at the end of the inner web, decreasing towards the centre of the tail; crown of head golden yellow, a little brighter than the hind neck and mantle; lores, eyebrow, sides of face, and entire under surface of body golden yellow, the under tail-coverts white; under wing-coverts and axillaries golden yellow; quills black below, with a large white base: "bill and feet blackish lead-colour" (*S. & G.*). Total length 9 inches, culmen 1·05, wing 4·6, tail 3·7, tarsus 1.

Adult female. Different from the male. General colour above ashy brown, mesially streaked with darker brown on the mantle; scapulars, lower back, and rump uniform dull yellowish; lesser wing-coverts dull olive-yellow, with dusky bases; median and greater coverts ashy brown with dusky bases, and with small white spots at the tip, diminishing with abrasion; bastard-wing and primary-coverts dusky, edged with ashy brown; quills dusky brown, externally edged with ashy olive, with a small white speculum at the base of the primaries; upper tail-coverts ashy grey; tail-feathers pale brown, edged with ashy, the outer ones with a slight edging of white at the tip; head and hind neck yellowish washed with olive, and mesially striped with black; lores and a streak over the eye golden yellow; in front of the eye a spot of dull ashy; eyelids yellow; ear-coverts dull yellow washed with olive; cheeks and under surface of body golden yellow, washed with ashy olive on the

sides of the body and flanks; sides of neck golden yellow, streaked with black like the hind neck; thighs ashy; under tail-coverts white; under wing-coverts and axillaries pale golden yellow; quills below dusky, ashy along the inner web. Total length 9·5 inches, culmen 1·05, wing 4·5, tail 3·45, tarsus 1.

Young male. Similar to the old female, but more yellow above; wings and tail as in the adult female, but with larger white spots at the end of the wing-coverts and secondaries; the white base to primaries also larger; under surface brighter yellow, as well as the eyebrow and sides of face.

Hab. Western Mexico.

a. ♂ ad. sk.	Mexico (*H. Cuming*).	Zoological Society. (Type of species.)
b. ♂ ad. sk.	Mazatlan (*Grayson*).	Sclater Coll.
c. ♀ ad. sk.	Mazatlan (*Grayson*).	Salvin-Godman Coll.
d. ♂ juv. sk.	Mazatlan, Dec. 5 (*A. Forrer*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Presidio, Mexico, Jan. 7 (*A. Forrer*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Presidio, Mexico, June 12 (*A. Forrer*).	Salvin-Godman Coll.

2. Pheucticus chrysogaster.

Pitylus chrysogaster, *Less. Cent. Zool.* pl. 67 (1830); *Gray, Gen. B.* ii. p. 362 (1844).

Pitylus dorsigerus, *Jard. & Selby, Ill. Orn.* iv. (n. s.) pl. 44 (c. 1840).

Coccoborus chrysogaster, *Tschudi & Cab. Faun. Peruan., Aves,* p. 222 (1855).

Pheucticus chrysogaster, *Scl. P. Z. S.* 1858, pp. 450, 454, 1859, p. 140, 1860, p. 87; *id. Cat. Amer. B.* p. 100 (1862); *id. & Salv. Nomenel. Av. Neotr.* p. 27 (1873); *Lawr. Mem. Bost. Soc. N. H.* iv. p. 275 (1874); *Tacz. P. Z. S.* 1880, p. 199; *Salv. Cat. Strickl. Coll.* p. 218 (1882); *Berl. & Tacz. P. Z. S.* 1883, p. 549, 1884, p. 292; *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 335 (1884); *Tacz. Orn. Pérou,* iii. p. 335 (1884).

Goniaphea chrysopeplus, *Gray, Hand-l. B.* ii. p. 104, no. 7550 (1870).

Pheucticus chrysopeplus (*nec Vig.*), *Tacz. P. Z. S.* 1874, p. 519, 1879, p. 229.

Adult. Similar to *P. chrysopeplus,* but much smaller, and not showing the white edging to the ends of the primaries; the back also is more uniform black, slightly broken up by a few golden marks on the inner webs of the feathers of the mantle, instead of being golden, mottled with black on a few of the mantle-feathers: "upper mandible blackish, the lower yellow; legs and feet lead-colour, claws brown; iris dark hazel" (*L. Fraser*). Total length 7·7 inches, culmen 0·9, wing 4·05, tail 3·2, tarsus 0·95.

Adult female. Similar to the female of *P. chrysopeplus,* and differing in the same way from the male: "bill dark horny grey, the lower mandible ashy horny with black edges; feet leaden" (*Jelski*).

Total length 7 inches, culmen 0·85, wing 3·8, tail 2·9, tarsus 0·95.

Peruvian specimens are rather larger (wing 4·2). Berlepsch and Taczanowski point out other slight differences (P. Z. S. 1884, p. 292).

The descriptions are taken from a pair of birds from Pallatanga, but the characters which separate this species from *P. chrysopeplus* are not so constant as the above notes would seem to indicate, for the mantle and upper back are often mottled with golden yellow, and are occasionally golden yellow, largely spotted with black, while the primaries are in many specimens margined with white, as in *P. chrysopeplus*, so that the two species are really very closely allied. On the peculiar geographical distribution of the two, it is scarcely necessary to enlarge, *P. chrysopeplus* being a Mexican bird, while between its range and that of its near ally interposes the very distinct *P. tibialis* (cf. *Salvin & Godman, Biol. Centr.-Amer., Aves*, p. 335).

Hab. From Venezuela to Ecuador and Peru.

a. Ad. st.	South America	Purchased.
b. ♂ imm. sk.	Caracas, Venezuela (*A. Goering*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Venezuela.	Sclater Coll.
d. ♂ ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Santa Rita, Ecuador (*Villagomez*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Pallatanga, Ecuador (*L. Fraser*).	Sclater Coll.
h. ♀ ad. sk.	Cuenca, Ecuador (*L. Fraser*).	Sclater Coll.
i. ♂ ad. sk.	Quito.	J. Gould, Esq.
k, l. ♂ ♀ ad. sk.	Guayaquil.	Capt. Kellett & Lieut Wood [P.].
m, n. ♂ ♀ ad. sk.	Islay, Peru, Sept.	H. Whitely, Esq. [C.].
o, p. ♀ ad. sk.	Islay, Peru, May 16 (*H. Whitely*).	Sclater Coll.
q. ♂ juv. sk.	Islay, Peru, June 11 (*H. W.*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Arequipa, Peru (*H. W.*)	Salvin-Godman Coll.

3. Pheucticus tibialis.

Pheucticus tibialis, *Lawr. Ann. Lyc. N. Y.* viii. p. 478 (1866, *ex Baird, MSS.*); *id. op. cit.* ix. p. 102 (1861); *Salvad. Atti R. Accad. Sci. Torino*, iv. p. 177 (1869); *Frantz. J. f. O.* 1869, p. 300; *Salv. P. Z. S.* 1870, p. 189; *Scl. & Salv. t. c.* p. 840; *iid. Nomencl. Av. Neotr.* p. 25 (1873); *Boucard, P. Z. S.* 1883, p. 58; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 335 (1884).
Goniaphea tibialis, *Gray, Hand-l. B.* ii. p. 104, no. 7551 (1870).

Adult male. General colour above black, slightly varied with olive-yellow margins to the feathers of the mantle and upper back; lower back golden yellow, streaked with black; rump golden

yellow, slightly washed with olive; wing-coverts, bastard-wing, and primary-coverts black; quills black, the primaries white at the base, forming a large alar speculum; upper tail-coverts black, broadly edged with white at the ends; tail-feathers black; entire head and hind neck, sides of face, sides of neck, and entire under surface of body golden yellow, with concealed subterminal dusky bars on the throat; abdomen and under tail-coverts paler yellow, the long ones of the latter whitish; lores and feathers below the eye dusky blackish; thighs black, with obsolete remains of olive margins to the feathers; axillaries and under wing-coverts golden yellow; quills black below, white at base of quills: "bill and feet leaden black" (*Salvin and Godman*). Total length 7·75 inches, culmen 0·95, wing 4·2, tail 3, tarsus 0·95.

Adult female. Not very different from the male. Rather duller on the head and underparts, the dusky subterminal marks on the throat-feathers a little more distinct; the black mantle rather more mottled with broader margins of yellow. Total length 7·75 inches, culmen 0·95, wing 4·25, tail 3·05, tarsus 0·9.

Hab. Central America, from Costa Rica to Panama..

a. ♂ ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Rancho Redondo, Costa Rica, March 2 (*F. Carmiol*; Sm. no. 47422).	Salvin-Godman Coll.
c. ♂ ad. sk.	Valza, Costa Rica, Feb. 23 (*J. Carmiol*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Costa Rica (*Carmiol*).	Sclater Coll.
f. ♂ ad. sk.	Veragua, Panama.	E. Arcé [C.].
g. ♀ ad. sk.	Calovevora, Panama.	E. Arcé [C.].
h, i. ♂; *k.* ♀ ad. sk.	Calovevora, Panama (*E. Arcé*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Veragua (*E. Arcé*).	Sclater Coll.

4. Pheucticus aureiventris.

Pitylus aureiventris, *D'Orb. & Lafr. Syn. Av. in Mag. de Zool.* 1837, p. 84 (1837); *D'Orb. Voy. Amér. Mérid., Ois.* p. 365, pl. 49. fig. 2 (1835–44); *Gray, Gen. B.* ii. p. 362 (1844).

Coccoborus aureiventris, *Bp. Consp.* i. p. 504 (1850); *Licht. Nomencl.* p. 45 (1854).

Pheucticus aureiventris, *Sclater, Cat. Amer. B.* p. 99 (1862, pt.); *Pelz. Orn. Bras.* p. 221 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *iid. P. Z. S.* 1874, p. 677, 1879, p. 604; *Tacz. P. Z. S.* 1874, p. 518; *White, P. Z. S.* 1882, p. 598; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 334 (1884); *Tacz. Orn. Pérou*, iii. p. 1 (1886).

Goniaphea aureiventris, *Gray, Hand-l. B.* ii. p. 103, no. 7548 (1870).

Adult. General colour above black, with a few concealed subterminal marks of white or yellow on the mantle; lesser wing-coverts golden yellow; median coverts black, the inner ones white for their terminal half; greater coverts black, with a larger spot of white

towards the outer web; bastard-wing and primary-coverts black; quills black, with a large white mark on the base of the primaries; inner secondaries with a white spot on the inner web; upper tail-coverts black, tipped with white, the lateral ones with yellow; tail-feathers black, with a large white mark at the tip, decreasing gradually in extent towards the centre of the tail; crown of head, hind neck, lores, feathers round the eye, ear-coverts, cheeks, sides of neck, throat, and fore neck black, some of the lower feathers black tipped with yellow; breast, abdomen, sides of body, and flanks yellow; thighs yellow with black bases; under tail-coverts white, edged with yellow; under wing-coverts and axillaries golden yellow, the lower coverts black; quills below black, with a large white patch at the base of the inner web: "bill horny blackish above, the lower mandible dark at the base and pale at the extremity; feet blackish brown; iris dark brown" (*Jelski*). Total length 8 inches, culmen 1, wing 4·4, tail 3·5, tarsus 1.

The *adult male* appears to take some time in getting his full plumage, and the amount of white on the outer tail-feather varies greatly; there is also a considerable amount of black spotting. None of the specimens in the collection have their sexes determined, and I am unable to say if the adult female resembles the adult male in plumage, but this is most probably the case.

The *young bird* has the wing and tail brown, and the whole upper surface appears to be duller black, mottled with yellowish edges to the feathers; lores and a faint eyebrow yellow; ear-coverts and sides of face black; cheeks and sides of neck yellow, mottled with black spots; entire under surface of body yellow, with black spots on the throat and black bars on the lower flanks; under tail-coverts white.

Hab. Bolivia, extending to the vicinity of Salta in the Argentine Republic, and Upper Paraguay and the province of Matogrosso in Brazil.

a. ♂ ad. sk.	Interior of Bolivia.	Salvin-Godman Coll.
b. ♂ ad.; *c*. Juv. sk.	Bolivia.	Sclater Coll.
d. ♂ ad. sk.	Sorata, Bolivia (*C. Buckley*).	Sclater Coll.
e, *f*. ♂ ad. sk.	Sorata, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

5. Pheucticus uropygialis.

Pheucticus aureiventris (*nec D'Orb. & Lafr.*), *Cab. Mus. Hein.* Th. i. p. 153 (1850); *Scl. P. Z. S.* 1855, p. 154.

Pheucticus uropygialis, *Scl. & Salv. P. Z. S.* 1870, p. 840; *iid. Nomencl. Av. Neotr.* p. 27 (1873); *Salv. Cat. Strickl. Coll.* p. 218 (1882); *id. & Godman, Biol. Centr.-Amer., Aves*, i. p. 334 (1884); *Taez. Orn. Pérou*, iii. p. 2 (1886).

Adult (type of species). General colour above black; the lower back and rump golden yellow, mottled with black spots at the end

of the feathers; upper tail-coverts black, with subterminal spots of yellow; lesser wing-coverts yellow, the remainder black, the median series tipped with large white spots, and the inner greater coverts similarly spotted; bastard-wing and primary-coverts black; quills black, the primaries with a conspicuous white basal mark, the inner secondaries with remains of white spots; tail-feathers black, the outer feather white for nearly the terminal half, with a tiny black spot at the end; the next three feathers with a white mark at the end of the inner web, decreasing in size towards the centre of the tail; crown and sides of head, sides of neck, and entire throat and fore neck like the back; remainder of under surface of body golden yellow, the sides of the body and flanks mottled with black bars at the ends of the feathers; thighs yellow, with black bases; under tail-coverts yellow, the larger ones white, washed with yellow and narrowly tipped with black; axillaries and under wing-coverts yellow; quills black below, with a large patch of white at the base of the primaries: "bill brownish black, lower mandible paler and lead-colour at base; feet horny; iris dark brown" (*Jelski*). Total length 7·5 inches, culmen 0·95, wing 4·4, tail 3·65, tarsus 0·95.

The only variation of adult specimens that I can perceive in a series lies in the greater or less amount of black spotting on the sides of the body, which is sometimes very faint and at other times is strongly developed. The specimens with the less pronounced black spots on the flanks may turn out to be females.

The adult specimens from Ecuador differ from Colombian specimens in having a pale yellow subterminal bar to the feathers of the mantle, which is slightly mottled in consequence.

Young specimens are browner than the adults, and have a yellow patch on the lower throat, the fore neck being black, spotted with yellow.

Hab. Colombia, extending to Ecuador and Peru; ? Guiana.

a. Ad. sk.	[Guiana ?]	Sclater Coll.
b, c. Ad. sk.	Bogotá.	Sclater Coll.
d. Ad. sk.	Bogotá.	Sclater Coll. (Type of species.)
e. Ad.; *f, g.* Juv. sk.	Bogotá.	Purchased.
h. Ad. sk.	Bogotá.	Salvin-Godman Coll.
i. Ad. sk.	Bogotá.	J. Purdie, Esq. [P.].
k. Ad. sk.	Pasto, Ecuador (*Lehmann*).	
l. Ad. st.	[S. America.]	Zoological Society.

6. Pheucticus crissalis.

Pheucticus aureiventris (*nec D'Orb. & Lafr.*), *Scl. P. Z. S.* 1858, p. 551, 1860, p. 87.

Pheucticus crissalis, *Scl. & Salv. P. Z. S.* 1877, p. 19; *Tacz. & Berlepsch, P. Z. S.* 1885, p. 84.

Pheucticus hemichrysus (*lapsu*), *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 334 (1884).

Adult. General colour above black, slightly mottled on the mantle-feathers with concealed bases of yellow; rump and lower back golden yellow, spotted with black tips to the feathers; lesser wing-coverts black; median and greater coverts black, the inner ones with broad white ends, confined to the outer web of the outer greater coverts; bastard-wing and primary-coverts black; quills black, the primaries with conspicuous white bases; secondaries with small white tips at the end of the inner web, increasing in extent towards the back; upper tail-coverts black, with a large white spot at the ends; tail-feathers black, with a large white patch at the end of the inner web, increasing in extent towards the outermost; crown of head, hind neck, lores, feathers round the eye, and ear-coverts black; cheeks black, mottled with yellow bases; entire under surface of body golden yellow, with a little black on the chin; sides of neck also mottled with black tips to the feathers; sides of body and flanks with a few black spots; under tail-coverts white, washed with yellow near the vent; under wing-coverts and axillaries golden yellow, with a patch of black near the white base of the primaries; quills below black, with a conspicuous white base to the primaries. Total length 7·8 inches, culmen 0·95, wing 4·4, tail 3·4, tarsus 1.

The sexes in this species are apparently alike, but none of those in the British Museum are correctly determined. Some of them, apparently immature, have the head and back strongly mottled with golden-yellow bases to the feathers, and have likewise olive-yellow edgings to the dorsal plumage. There is also in these mottled examples a strongly pronounced eyebrow of golden yellow.

Young. Differs from the adult in being much more dingy, and is washed with pale fawn-colour on the lower back and rump, and also on the under surface of the body, which is yellow only on the throat and centre of the breast and abdomen; sides of body and lower abdomen and under tail-coverts dull white, slightly washed with fawn-colour; crown of head and ear-coverts black, the former with a mesial streak of orange-buff, mottled with black tips to the feathers; a broad eyebrow of orange-buff.

Hab. Ecuador.

a. Ad.; *b.* Imm. sk.	Riobamba, Ecuador (*L. Fraser*).	Sclater Coll. (Types of species.)
c, d. Ad.; *e.* Juv. sk.	Ecuador.	Sclater Coll.
f, g. Ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

12. HEDYMELES.

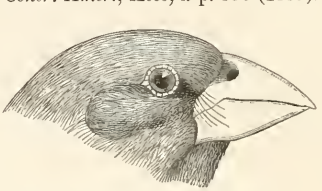
Type.

Habia, *Reichenb. Syst. Nat.* Taf. lxxviii. fig. 14 (1850) } Typo haud indicato.

Hedymeles, *Cab. Mus. Hein.* Th. i. p. 152 (1851) (*nec* Hedymela, *Sund.*) ..... H. ludovicianus.

Zamelodia, *Coues, Bull. Nutt. Orn. Club*, v. p. 98 (1880) ..... H. ludovicianus.

Cf. *Stejneger, Auk*, i. p. 367 (1884); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 336 (1884).



Head of *Hedymeles ludovicianus*.

Range. North America generally, ranging throughout Central America to Colombia, Ecuador, and the Antilles.

Key to the Species.

a. Head black, as well as the back and throat; fore neck and chest rosy; axillaries rosy..... *ludovicianus* ♂ ad., p. 59.

b. Head black, as well as sides of feet and chin; throat and breast tawny; axillaries yellow..... *melanocephalus* ♂ ad., p. 63.

c. Head blackish, with pale centre to the crown; axillaries yellow.

a'. Uniform pale tawny below, yellow in the centre of the breast.... *melanocephalus* ♂ juv., p. 64.

b'. Streaked below.

a''. No yellow in the centre of the breast ..... *ludovicianus* ♀ ad. & ♂ juv., [p. 60.

b''. Centre of breast washed with yellow ..... *melanocephalus* ♀ ad., p. 63.

1. Hedymeles ludovicianus.

Le Gros-bec de la Louisiane, *Briss. Orn.* iii. p. 247, pl. xii. fig. 2 (1760); *Daubent. Pl. Enl.* iv. pl. 153. fig. 2.

Loxia ludoviciana, *Linn. Syst. Nat.* i. p. 306 (1766).

Le Rose-gorge, *Buff. Hist. Nat. Ois.* iii. p. 460 (1775).

Loxia rubricollis, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 151 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 252.

Red-breasted Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 126 (1783); *Penn. Arctic Zool.* ii. p. 350 (1785).

Spotted Grosbeak, *Lath. t. c.* p. 126; *Penn. t. c.* p. 350.

Dusky Grosbeak, *Lath. t. c.* p. 127 ; *Penn. t. c.* p. 351.
Red-breasted Finch, *Lath. t. c.* p. 272 ; *Penn. t. c.* p. 372.
Loxia rosea, *Wils. Amer. Orn.* ii. p. 135, pl. xvii. fig. 2 (1810).
Pyrrhula ludoviciana, *Sabine in Franklin's Journ.* i. App. p. 675 (1823).
Coccothraustes rubricollis, *Vieill. Gal. Ois.* i. p. 67, pl. 58 (1825).
Guiraca ludoviciana, *Swains. Phil. Mag.* n. s. i. p. 438 (1827) ; *Jard. ed. Wils. Amer. Orn.* i. p. 277, pl. 17. fig. 2 (1832) ; *Bp. P. Z. S.* 1837, p. 116 ; *id. Comp. List B. Eur. & N. Amer.* p. 30 (1838) ; *Gray, Gen. B.* ii. p. 357 (1844) ; *Gosse, B. Jamaica*, p. 259 (1847) ; *Bp. Consp.* i. p. 501 (1850) ; *Baird, B. N. Amer.* p. 497 (1858) ; *Dresser, Ibis*, 1865, p. 491.
Fringilla ludoviciana, *Bp. Amer. Orn.* ii. p. 79, pl. xv. fig. 2 (1828) ; *Audub. B. Amer.* pl. 127 ; *id. Orn. Biogr.* ii. p. 166 (1834), v. p. 513 (1839).
Fringilla rhodocampter, *Licht. Preis-Verz. mex. Vög.* p. 1 (1830) ; *Cab. J. f. O.* 1863, p. 56.
Coccoborus ludovicianus, *Audub. Syn.* p. 133 (1839) ; *id. B. Amer.* 8vo, iii. p. 209, pl. 205 (1841) ; *Giraud, B. Long Isl.* p. 133 (1844) ; *Lembeye, Av. Cuba*, p. 59, pl. viii. fig. 1 (1850) ; *Neuwied, J. f. O.* 1858, p. 267.
Hedymeles ludovicianus, *Cab. Mus. Hein.* Th. i. p. 152 (1850) ; *Scl. P. Z. S.* 1856, p. 301, 1859, p. 58 ; *id. & Salv. Ibis*, 1859, p. 17 ; *Moore, P. Z. S.* 1859, p. 365 ; *Scl. P. Z. S.* 1860, p. 293 ; *Cab. J. f. O.* 1861, p. 7 ; *Lawr. Ann. Lyc. N. Y.* vii. p. 297 (1861) ; *Scl. Cat. Amer. B.* p. 100 (1862) ; *Lawr. Ann. Lyc. N. Y.* ix. pp. 102, 200 (1868) ; *Frantz. J. f. O.* 1869, p. 300 ; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869) ; *Scl. & Salv. P. Z. S.* 1870, p. 836 ; *Salv. t. c.* p. 189 ; *Wyatt, Ibis*, 1871, p. 328 ; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873) ; *Lawr. Mem. Bost. Soc. N. H.* i. p. 275 (1874) ; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 70 (1874) ; *Lawr. Bull. U. S. Nat. Mus.* no. 4, p. 19 (1876) ; *Scl. & Salv. P. Z. S.* 1879, p. 506 ; *Salv. & Godman, Ibis*, 1880, p. 122 ; *A. & E. Newton, Handb. Jamaica*, 1881, p. 104 ; *Salvin, Cat. Strickl. Coll.* p. 218 (1882) ; *Boucard, P. Z. S.* 1883, p. 444 ; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 336 (1884).
Goniaphea ludoviciana, *Gray, Hand-l. B.* ii. p. 103, no. 7546 (1870) ; *Allen, Bull. Harv. Coll.* iii. p. 177 (1872) ; *Coues, Key N. Amer. B.* p. 149 (1872) ; *id. B. N.-West*, p. 166 (1874) ; *Gundl. Orn. Cuba*, p. 95 (1876).
Zamelodia ludoviciana, *Coues, Bull. Nutt. Orn. Club*, v. p. 98 (1880) ; *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 27 (1881) ; *Coues, Check-list Amer. B.* p. 59 (1882) ; *id. Key N. Amer. B.* 2nd ed. p. 389 (1884).
Habia ludoviciana, *Stejneger, Auk*, i. p. 367 (1884) ; *Cory, List B. W. Indies*, p. 12 (1885) ; *id. op. cit.* 2nd ed. p. 12 (1886) ; *A. O. U. Check-list*, p. 287 (1886) ; *Cory, Auk*, iii. p. 202.

Adult male. General colour above black, the lower back and rump pure white, slightly mottled with black tips to a few of the lateral feathers ; lesser wing-coverts like the back ; median coverts black, the inner ones white, forming a patch ; greater coverts black, with a white spot at the tip of the outer web, increasing in extent towards the innermost coverts ; bastard-wing and primary-coverts black ; quills black, with large white bases to the primaries ; secondaries with a white spot at the tip ; upper tail-coverts black,

with a large white spot at the tip; tail-feathers black, the three outer ones with a large white mark near the end of the inner web, decreasing towards the centre of the tail; crown of head, lores, feathers round the eye, ear-coverts, cheeks, sides of neck, and throat black; fore neck and chest with a large patch of beautiful rose-colour extending in a line down the centre of the breast; sides of fore neck mottled with black; breast, abdomen, sides of body, flanks, thighs, and under tail-coverts white, the sides of body and flanks washed with ashy, spotted with black, as also the thighs; under wing-coverts and axillaries beautiful rose-colour, those near the edge of the wing black; quills below dusky, with white bases to the primaries; inner edge of quills white at base: "bill white; feet greyish blue; iris hazel" (*Audubon*). Total length 7·4 inches, culmen 0·7, wing 4·1, tail 3·9, tarsus 0·4.

Adult female. Different from the male. General colour above ochreous brown, streaked with black centres, the mantle-feathers with slightly lighter edgings; rump and upper tail-coverts uniform ashy brown; lesser wing-coverts ochreous brown; median and greater coverts dusky, externally lighter brown, with a white spot at the ends; bastard-wing dusky brown; primary-coverts dark brown; quills dusky brown, externally pale ashy brown, with a small white speculum formed by white on the base of the primaries; inner secondaries with white spots at the end of the inner web; tail-feathers light brown, edged with ashy brown; crown of head blackish brown on the sides, with a mesial streak of white or ochreous white; round the hind neck an indistinct whitish-brown shade; lores ochreous; a broad white streak above the ear-coverts; feathers below the eye spotted with white; ear-coverts blackish brown, with pale shaft-lines; cheeks and under surface of body dull white, with a tinge of yellowish buff on the cheeks; throat, fore neck, and chest with broader triangular spots of blackish brown; breast and centre of abdomen dull white; sides of body and flanks longitudinally streaked with blackish brown; thighs dull white; under tail-coverts dull white, with dark-brown centres; under wing-coverts and axillaries pale orange-yellow; quills below dusky ashy brown; inner edge of quills ashy: "bill brown above, paler beneath; feet as in the male; iris hazel" (*Audubon*). Total length 7·2 inches, culmen 0·7, wing 3·84, tail 2·9, tarsus 0·85.

Young male. Similar to the old female, but much deeper ochreous brown, the upper tail-coverts and scapulars with pale ochreous tips; wing-coverts and inner secondaries with large terminal spots of ochreous white; otherwise the quills and tail as in the old female; head as in the latter sex, but rather more ochreous; facial markings as in old female; under surface of body as in old female, but rather more deeply tinged with ochreous buff, and less strongly streaked and spotted with blackish; the centre of the fore neck and breast with a concealed rosy tinge; axillaries and under wing-coverts pale rose-colour.

The slight tinge of rose-colour on the breast of the young male greatly develops when the bird is in its winter-quarters, and the

streaks on the breast and throat gradually disappear as the red colour spreads upwards, and the adult plumage appears to be gained by a change of feather and not by any moult. As the black spreads on the upper surface the streaks disappear, and at last the ochreous-brown colour, which is characteristic of the young bird, remains only in the shape of edgings to the mantle, back, and scapulars; the white rump remains much mottled with black tips to the feathers, which often obscure the whole of it.

In the British Museum series, large as it is, there is no specimen which proves to my satisfaction that the old male goes through a complete winter plumage. If it does so, it must entirely lose the black head and black throat. Apparently the wing-coverts and quills *are* renewed in the spring by a moult; but whether this is the case with the young birds only in their first spring, or with old birds as well, I have been unable to determine.

A specimen from Ecuador in the Salvin-Godman collection shows that the black dorsal plumage is assumed by a direct moult, as well as the black throat. The question is whether both old and young birds gain their summer dress by a moult or by a change of feather.

Hab. Canada and Eastern United States to plains of Missouri River; Texas; throughout Central America to Colombia and Ecuador; Cozumel; Cuba; Jamaica.

a, b. ♂ ♀ ad. st.	North America.	Purchased.
c, d. ♂ ♀ ad. sk.	Arctic America.	Sir George Back [P.].
e. ♂ ad. sk.	Pembina, Dakota, June 2 (*Dr. E. Coues*; Sm. no. 63947).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Fort Dufferin, Manitoba, June (*G. Dawson*).	N. A. Boundary Commission [P.].
h. ♂ ad.; *i.* ♂ juv. sk.	Lake of Woods, July (*G. Dawson*).	N. A. Boundary Commission [P.].
k. ♀ ad. sk.	Poughkeepsie, New York (*Dr. Shufeldt*; Sm. no. 88076).	U. S. Nat. Museum.
l. ♂ ♀ ad. sk.	Albany, New York (*J. Hurst*).	Sclater Coll.
m. Juv. sk.	Cooperstown, New Jersey, Sept. 1 (*G. S. Allen*; Sm. no. 76353).	Salvin-Godman Coll.
n. ♀ ad. sk.	Englewood, Illinois (*E. W. Nelson*).	H. K. Coale, Esq. [P.].
o. ♀ ad. sk.	Hyde Park, Illinois, May 16, 1883 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p. ♀ ad. sk.	Michigan.	Prof. J. B. Steere [P.].
q. ♂ ad. sk.	St. Louis, Missouri, May 15 (*W. S. Wood*; Sm. no. 7017).	Salvin-Godman Coll.
r. ♂ ad. sk.	Knox Co., Indiana, May 6 (*R. Ridgway*; Sm. no. 82247).	U. S. Nat. Museum [P.].
s. ♂ imm. sk.	Knox Co., May 4 (*R. Ridgway*; Sm. no. 82245).	U. S. Nat. Museum [P.].
t. ♂ imm. sk.	Tonalá (Chiapas), Mexico, Mar 3. (*F. Sumichrast*).	Salvin-Godman Coll.
u. ♂ imm. st.	Mexico.	Purchased.
v. ♂ ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.

w. ♂ imm. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
x. ♂ imm. st.	Northern Yucatan (*G. F. Gaumer*).	Sclater Coll.
y, *z*. ♂ ad.; *a'*, *b'*. ♀ ad.; *c'*, *d'*, *e'*. ♂ imm. sk.	Cozumel Island, April (*G. F. Gaumer*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Jolbox Island, Dec. (*G. F. Gaumer*).	Salvin-Godman Coll.
g', *h'*. ♂ ad.; *i'*. ♂ imm. sk.	Ruatan Island, Dec. (*G. F. Gaumer*).	Salvin-Godman Coll.
k'. ♀ ad. sk.	Cache, Costa Rica, Feb. 17 (*H. Rogers*).	Salvin-Godman Coll.
l'. ♀ ad. sk.	San José, Costa Rica, Jan. 24 (*F. Carmiol*).	Salvin-Godman Coll.
m'. ♂ ad. sk.	Angostura, Costa Rica, March 26 (*F. Carmiol*; Sm. no. 41363).	Salvin-Godman Coll.
n'. ♂ imm. sk.	Calderas, Volcan de Fuego, Guatemala, Oct. 30 (*O. S.*).	Salvin-Godman Coll.
o', *p'*. ♂ ♀ imm. sk.	Dueñas, Guatemala, Oct. (*O. S.*).	Salvin-Godman Coll.
q'. ♂ imm. sk.	Tactic, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.
r'. ♂ imm. sk.	Choctum, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.
s'. ♂ imm. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
t'. ♀ juv. sk.	Guatemala.	G. U. Skinner, Esq. [C.].
u'. ♂ imm. sk.	Southern slope of the Volcan de Chiriqui, Panama (*E. Arcé*).	Salvin-Godman Coll.
v'. ♀ imm. sk.	Minca, Sierra Nevada of Santa Marta, U. S. Colombia, 3000 feet, Jan. 29 (*F. Simons*).	Salvin-Godman Coll.
w'. ♂ imm. sk.	Medellin, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
x'. ♂ imm. sk.	Bogotá.	Sclater Coll.
y'. ♂ imm. sk.	Intaj, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
z'. ♂ imm. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

2. Hedymeles melanocephalus.

Guiraca melanocephala, *Swains. Phil. Mag.* n. s. i. p. 438 (1827); *Bp. P. Z. S.* 1837, p. 111; *id. Comp. List B. Eur. & N. Amer.* p. 30 (1838); *id. Consp.* i. p. 502 (1850); *Baird, B. N. Amer.* p. 498 (1858); *Dugès, La Nat.* i. p. 139 (1868); *Sumichr. Mem. Bost. Soc.* i. p. 551 (1869); *Cooper, B. Calif.* p. 228 (1870).

Fringilla epopæa, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 56.

Fringilla xanthomaschalis, *Wagler, Isis*, 1831, p. 525.

Pitylus guttatus, *Less. Rev. Zool.* 1839, p. 182.

Coccoborus melanocephalus, *Audub. Syn.* p. 133 (1839); *id. B. Amer.* 8vo, iii. p. 214, pl. 206 (1841).

Pitylus melanocephalus, *Gray, Gen. B.* ii. p. 362 (1844).

Hedymeles melanocephalus, *Cab. Mus. Hein.* Th. i. p. 153 (1850); *Scl. P. Z. S.* 1857, p. 213, 1858, p. 303, 1859, p. 365; *id. Cat. Amer. B.* p. 100 (1862); *id. P. Z. S.* 1864, p. 174; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Lawr. Mem. Bost. Soc.* ii.

p. 275 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 73 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 296 (1875); *Salv. Cat. Strickl. Coll.* p. 218 (1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 338 (1884).

Goniaphea melanocephala, *Gray, Hand-l. B.* ii. p. 103, no. 7547 (1870); *Coues, Key N. Amer. B.* p. 149 (1872); *id. B. N.-West*, p. 167 (1874).

Hedymeles melanocephalus, var. capitalis, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 70 (1874).

Zamelodia melanocephala, *Coues, Bull. Nutt. Orn. Club*, v. p. 98 (1880); *Ridgw. Bull. U.S. Nat. Mus.* ii. p. 27 (1881); *Coues, Check-list*, p. 59 (1882); *id. Key N. Amer. B.* 2nd ed. p. 389 (1884).

Habia melanocephala, *Stejneger, Auk*, i. p. 367 (1884); *A. O. U. Check-list N. Amer. B.* p. 287 (1886).

Adult male. General colour above black, the mantle mottled, the feathers having black spots at the tips, with a subterminal bar of white and a bar or mark of pale fawn-colour between the latter and the black spot; lower back and rump uniform fawn-colour; upper tail-coverts black, with pale fawn-coloured tips; scapulars and wing-coverts black, the inner lower coverts tipped with white and the inner median coverts entirely white, forming a wing-patch; greater coverts with a white spot at the tip of the outer web; bastard-wing and primary-coverts black; quills black, the secondaries spotted with white at the end of the outer web; the outer primaries edged with white near the end of the outer web and all white at the base, forming a large white patch; tail-feathers black, the outermost with a large white mark near the end of the inner web, slightly reduced on the penultimate feather, the third with a mere fringe at the tip of the inner web; head black, separated from the back by a broad collar of orange-buff or fawn-colour, which encircles the entire hind neck; sides of face, ear-coverts, and fore part of cheeks black, as well as the chin and the anterior half of the malar line; hinder cheeks, sides of neck, and underparts deep orange-buff or fawn-colour; the centre of the breast yellow; the centre of the abdomen, thighs, and under tail-coverts white; axillaries and under wing-coverts clear fine yellow; quills black below, with a large white basal patch: "bill, with the upper mandible dusky, the lower white; feet and claws wood-brown; iris hazel" (*Audubon*). Total length 7·5 inches, culmen 0·75, wing 3·95, tail 2·95, tarsus 0·95.

Males in full plumage vary considerably in the markings of the upper parts. In some the mantle and upper back are entirely tawny, streaked with broad lines of black; these appear to be very old birds. Others have the back much mottled, the feathers being broadly edged and spotted with black; and in *winter plumage* the adults seem to have the dorsal feathers very plainly edged with tawny buff, while the white spots on the inner secondaries are larger and more pronounced. These spots seem to get nearly worn off in the breeding-season.

Adult female. Different from the male, and not so brightly

coloured. General colour above ashy brown, streaked with black down the centre of the feathers; the feathers of the mantle mottled with broad whitish or fulvous edges; rump like the back, slightly washed with pale fawn-colour, and mottled with black bases to the feathers; upper tail-coverts ashy, tipped with dull white, before which is a subterminal shade of blackish; lesser wing-coverts ashy ochreous with dusky bases; median and greater coverts ashy brown with dusky bases, both series tipped with spots of white; bastard-wing, primary-coverts, and quills dusky brown, externally edged with ashy brown, the primaries white near the extreme base and towards the end of the outer web, the inner secondaries with a white spot at the end of the outer web; tail-feathers uniform dusky brown, edged with ashy brown; crown blackish on the sides, mottled with ashy-brown margins to the feathers; along the centre of the crown a light streak of white or ochreous feathers, minutely streaked with black; feathers below the eye, lores, and a narrow eyebrow white, more developed above the ear-coverts; eyelid, sides of face, and ear-coverts blackish brown; cheeks and under surface of body pale fawn-buff, light fulvous on the sides of the breast and flanks, slightly mottled with black streaks on the former, the flanks with distinct linear streaks of black; centre of breast slightly washed with yellow; the abdomen, vent, and under tail-coverts whitish, washed with pale fawn-colour; axillaries and under wing-coverts bright lemon-yellow; quills dusky, ashy whitish along the edge of the inner web: "bill olive, fleshy white at base; feet slate-colour; iris brown" (*Cooper*). Total length 7 inches, culmen 0·8, wing 0·9, tail 2·9, tarsus 0·95.

Young male. Similar to the adult female, having the head blackish, with the same pale mesial streak; the under surface somewhat brighter fawn-buff.

Young females resemble the old female, but have more streaks on the under surface, the fore neck and breast being narrowly streaked with blackish.

The specimens from California (*H. capitalis*) have the rufous streak on the hinder crown and the line behind the eye, which are said by Mr. Ridgway to be characteristic of that race. As, however, he states that intermediate specimens are sometimes met with, I have not separated the two races.

Hab. High central plains of North America from Middle Kansas to the Pacific, ranging into Mexico.

α. H. melanocephalus.

a. ♀ ad. sk.	Camp Sheridan, Nebraska (*J. A. Leigh*; Sm. no. 70501).	U.S. Nat. Mus. [P.].
b. ♂ ad. sk.	Fort Bridger, Utah, May 22 (*C. Dexler*; Sm. no. 11244).	Salvin-Godman Coll.
c. ♂ juv. sk.	Camp Crittenden, Arizona, Sept. 2 (*H. W. Henshaw*; Sm. no. 69652).	Salvin-Godman Coll.

d. ♀ ad. sk.	Fuller's, Arizona (*E. W. Nelson*; Sm. no. 98929).	U.S. Nat. Mus. [P.].
e. ♂ juv. sk.	Arizona (*E. W. Nelson*; Sm. no. 99698).	U.S. Nat. Mus. [P.].
f. ♂ ad. sk.	Northern California (*C. H. Townsend*; Sm. no. 91931).	U.S. Nat. Mus. [P.].
g. ♀ ad. sk.	Jalapa, Mexico (*De Oca*).	Sclater Coll.
h, i. ♂ ♀ ad. sk.	Jalapa (*De Oca*).	Salvin-Godman Coll.
j. ♂ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad. sk.	Orizaba (*Botteri*).	Sclater Coll.
m. ♂ ad sk.	Presidio, Mexico, Dec. 25 (*A. Forrer*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Presidio, Mexico, Feb. 25 (*A. Forrer*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Mexico (*J. Taylor*).	Zoological Society. (Type of species.)
p, q. ♂ ♀ ad. st.	Mexico.	Purchased.

β. H. capitalis.

r. ♂ ad. sk.	San Bernardino, California, June 14.	R. B. Sharpe, Esq. [P.].
s, t, u. ♂; *v.* ♀ ad. sk.	California.	Lord Walsingham [P.].
w. Juv. sk.	Nevada, California, Oct. (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].

13. GUIRACA*.

	Type.
Guiraca, *Swains. Zool. Journ.* iii. p. 350 (1827)	G. cærulea.
Coccoborus, *Swains. Classif. B.* ii. p. 277 (1837).....	G. cærulea.

Head of *Guiraca cærulea*.

Range. North America; Central America; and South America except the southern portions, Chili and Southern Patagonia.

Two well-marked sections exist in the present genus, characterized by a strong differential peculiarity in the assumption of the spring plumage. So far as the series examined by me goes to testify, *G. cærulea* assumes the spring plumage by an abrasion of the

* The late Mr. G. R. Gray restored for this genus the name of *Goniaphea* of Bowditch (Trav. Madeira, p. 29); but, while admitting the characters of the latter genus to have been taken in all probability from one of the species of *Guiraca*, there is so much uncertainty about it that it is not advisable to resuscitate Bowditch's name.

pale margins which the feathers assume in winter. This species is likewise distinguished by a richer variety of colour than the more southern forms, *G. cyanea* and its allies. All the latterapparently differ in no wise in colour, and the young birds moult directly from the immature brown plumage into the full blue plumage of the adults. *G. parellina*, however, resembles the *G. cyanea* group in its style of coloration, but yet possesses a seasonal plumage like *G. cærulea*, and assumes the breeding-dress through the abrasion of the pale edges of the feathers, thus forming an interesting link between the two sections of the genus.

Key to the Species.

Males.

a. With a chestnut wing-patch formed by the median coverts ..... *cærulea*, p. 66.

b. With no chestnut on the wings.

a'. Smaller; wing not exceeding 2·65 inches: lower back and rump conspicuously brighter blue than the mantle ..... *parellina*, p. 69.

b'. Larger; wing at least 2·7 inches: lower back and rump slightly, if at all, brighter than the mantle.

a. Purplish blue, with a distinct bright frontal band and wing-patch formed by the lesser coverts ..... *cyanea*, p. 71. / *argentina*, p. 73.

b. Duller blue, frontal patch and shoulder-patch less distinct ..... *cyanoides*, p. 73.

c''. Dull indigo-blue or blackish, with a very faint frontal band and shoulder-patch *concreta*, p. 74.

d''. Entirely greenish blue above and below *glaucocærulea*, p. 75.

1. Guiraca cærulea.

Blue Grosbeak, *Catesby, Nat. Hist. Carol.* i. p. 39, pl. 39 (1731); *Lath. Gen. Syn.* ii. pt. 1, p. 116 (1783); *Penn. Arctic Zool.* ii. p. 351 (1785).

Le Bouvreuil bleu de la Caroline, *Briss. Orn.* iii. p. 323 (1760).

Loxia cærulea, *Linn. Syst. Nat.* i. p. 306 (1766); *Wagler, Isis*, 1831 p. 525; *Wilson, Amer. Orn.* iii. p. 78, pl. xxiv. fig. 6 (1811).

Fringilla cærulea, *Licht. Verz. Doubl.* p. 22 (1823); *Audub. B. Amer.* pl. cxxii.; *id. Orn. Biogr.* ii. p. 140 (1834), v. p. 508 (1839).

Guiraca cærulea, *Swains. Phil. Mag.* i. p. 438 (1827); *Jard. ed. Wils. Amer. Orn.* i. p. 307 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 30 (1838); *Gray, Gen. B.* ii. p. 357 (1844); *Baird, B. N. Amer.* p. 499 (1858); *Scl. P. Z. S.* 1859, pp. 365, 378; *Salvin, Ibis*, 1861, p. 352; *Scl. Cat. Amer. B.* p. 10 (1862); *id. P. Z. S.* 1864, p. 174; *Dresser, Ibis*, 1865, p. 491; *Lawr. Ann. Lyc. N. Y.* viii. p. 286 (1866); *Baird, Ibis*, 1867, p. 276; *Dugès, La Nat.* i. p. 139 (1868); *Lawr. Ann. Lyc. N. Y.* ix. p. 102 (1868), p. 200 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Von Frantz. J. f. O.* 1869, p. 301; *Cooper, B. Calif.* p. 230 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Scl. Ibis*, 1873, p. 373; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 76 (1874); *Lawr. Mem. Bost. Soc.*

ii. p. 276 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 20 (1876); *Hensh. Rep. Zool. Expl.* p. 298 (1875); *Merrill, Pr. U.S. Nat. Mus.* i. p. 128 (1878); *Gundl. Orn. Cuba*, p. 95 (1868); *Belding, t. c.* p. 419 (1879); *Cooper, op. cit.* ii. p. 248 (1880); *Brewster, Bull. Nutt. Orn. Club*, vii. p. 13 (1883); *Coues, Check-list*, p. 59 (1882); *Boucard, P. Z. S.* 1883, p. 444; *Nutting & Ridgw. Proc. U.S. Nat. Mus.* vi. p. 392 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 390 (1884); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 344 (1884); *A. O. U. Check-list*, p. 287 (1886).

Coccoborus cæruleus, *Swains. Classif. B.* ii. p. 277 (1837); *Audub. B. Amer.* iii. p. 204, pl. cciv. (1841); *Cab. Mus. Hein.* Th. i. p. 152 (1850); *Lembeye, Av. Cuba*, p. 61, pl. viii. fig. 2 (1850); *Cab. J. f. O.* 1856, p. 9; *Finsch, Abhandl. nat. Ver. Bremen*, i. p. 339 (1870).

Cyanoloxia cærulea, *Bp. Consp.* i. p. 502 (1850).

Goniaphea cærulea, *Scl. P. Z. S.* 1866, p. 301; *Gray, Hand-l. B.* ii. p. 103, no. 7535 (1870); *Coues, Key N. Amer. B.* p. 149 (1872); *id. B. N.-West*, p. 169 (1874); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 19 (1878), v. p. 392 (1879); *Brown, Bull. Nutt. Orn. Club*, iv. p. 9 (1879); *Loomis, t. c.* p. 214; *Allen, op. cit.* v. p. 184 (1880); *Nehrl. op. cit.* vii. p. 13 (1882).

Adult male in breeding-plumage. General colour above glossy greyish cobalt, rather darker and mixed with blackish bases on the feathers of the mantle, scapulars, and upper back; the lower back, rump, and upper tail-coverts much more brilliant than the mantle; lesser wing-coverts bright cobalt; median coverts deep bay or chestnut; greater coverts blackish, externally greyish blue (with generally some slight remains of chestnut edges, the remains of winter plumage); bastard-wing, primary-coverts, and quills blackish, externally greyish blue, lighter and more hoary grey on the primaries; tail-feathers blackish, margined with greyish cobalt, and fringed at the tip of the inner web with white, increasing in extent towards the outermost feathers; head and neck bright greyish cobalt, lighter than the mantle, and of the same shade as the lower back and rump; sides of the face, cheeks, and ear-coverts like the head; in front of the eye a black patch, extending from the base of the nostrils, and occupying also the base of the cheeks and base of the throat; entire under surface of body bright cobalt, duller on the thighs and abdomen and under tail-coverts, the latter fringed with white as well as the vent; axillaries and under wing-coverts of the same colour as the breast, with ashy bases; quills dusky below, ashy along the inner webs: "bill pale greyish blue beneath and on the edges of the upper mandible, the rest of which is dusky" (*Audubon*); "legs brownish black; iris dark brown" (*Dresser*). Total length 6·4 inches, culmen 0·75, wing 3·65, tail 2·85, tarsus 0·85.

The breeding-plumage of the adult male is always accompanied by a dark bill, the upper mandible being blackish in the skin, the lower one blackish with cutting-edges and tips of yellowish horn-colour As the season advances the blue margins to the feathers of the mantle and upper back get worn off, and thus these parts assume a darker appearance than the head and lower back and rump. The blue edges to the wing-coverts and quills almost disappear, but the

chestnut tips to the greater coverts never seem to become entirely lost. Great variation takes place in the size of the bill, the older birds appearing to have larger bills than the more immature ones.

Adult male in winter plumage. Ochreous brown above, entirely concealing the blue plumage, excepting on the lower back, rump, and upper tail-coverts, where the blue is apparent, but all the feathers are tipped with ochreous brown; scapulars and lesser wing-coverts like the back; median coverts chestnut, with paler fulvescent margins; greater coverts and inner secondaries broadly edged with ochreous buff; quills externally margined with ashy ochreous, the tail-feathers with blue, the white tips to the outer feathers being very distinct; sides of face and under surface of body ochreous brown, concealing the underlying blue plumage; the abdomen, vent, under tail-coverts, axillaries, and under wing-coverts broadly margined with ashy white; bill pale horn-colour in skin, browner along the crest of the upper mandible.

The *adult male* gains the summer plumage by the wearing off of the pale tips to the feathers, and not by a spring moult. Thus many full-plumaged birds show traces of the winter dress in the shape of light edges to the feathers, especially on the under surface of the body.

Adult female in breeding-plumage. Different from the male. Brown above, slightly mottled with darker brown bases on the mantle and upper back; lower back, rump, and upper tail-coverts ashy brown, contrasting slightly with the mantle; lesser wing-coverts bluish grey; median and greater coverts dark brown, tipped with ochreous buff, forming a double wing-bar; bastard-wing, primary-coverts, and quills dark brown, edged externally with ashy, the inner secondaries with ochreous buff: tail-feathers brown, shaded with greyish blue on the edges, and with small fringes of white at the ends of the inner webs of the outer feathers; head and neck clearer ochreous brown, as well as the sides of the face, cheeks, and ear-coverts; feathers round the eye lighter ochreous brown, the lores whitish; under surface of body pale ochreous buff, a little deeper on the fore neck and chest, and whiter on the throat and on the under tail-coverts, the latter slightly mottled with dark-brown bases; under wing-coverts and axillaries pale ochreous buff; quills dusky below, ashy along the inner webs. Total length 6·2 inches, culmen 0·7, wing 2·3, tail 2·4, tarsus 0·75.

Young males after the first moult resemble the adult female, but have the head and back of a uniform dark ochreous brown; the lower back, rump, and upper tail-coverts dull blue, more or less obscured by sandy-buff edges to the feathers: the wings, tail, and under surface of the body resemble the same parts in the old female, and the lores are white.

The *young female after the first moult* is similar to the young male, but is browner on the lower back and rump, which show no trace of blue, while the upper tail-coverts are broadly margined with ashy whitish. The young male may generally be distinguished

by traces of blue feathers about the head and neck, and, as the spring advances, by blue beneath the ochreous buff of the under surface.

Audubon says that the male does not attain the full plumage until the third year.

Hab. Southern portions of United States from Atlantic to Pacific, breeding throughout its U.S. range; rarely north to Massachusetts and even Maine (*Coues*); throughout Mexico and Central America to Nicaragua and Costa Rica. Cuba.

a, b. ♂ ad. st.	North America.	Purchased.
c. ♂ ad. sk.	Texas, lat. 32° (*Dr. Henry*; Sm. no. 6385).	Salvin-Godman Coll.
d. ♀ ad. sk.	Fort Cobb, May 26, 1860 (*C. S. McCarthy*; Sm. no. 19100).	Salvin-Godman Coll.
e. ♂ ad. sk.	Near the City of Mexico (*Elwes*).	Sclater Coll.
f. ♂ ad. sk.	Oaxaca, W. Mexico (*Fenochio*).	Salvin-Godman Coll.
g. ♂ ad.; *h.* ♀ juv. sk.	Mazatlan, W. Mexico, Dec. 12 (*A. Forrer*).	Salvin-Godman Coll.
i. ♀ ad.; *k.* ♂ juv. sk.	Presidio, Dec. 27 (*A. Forrer*).	Salvin-Godman Coll.
l. ♂ ad.; *m.* ♀ ad. sk.	Izamal, N. Yucatan, Jan. 16 (*G. F. Gaumer*).	Salvin-Godman Coll.
n, o, p, q, r. ♂ ad.; *s.* ♂ imm. sk.	Cozumel Island (*G. F. Gaumer*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Guatemala.	G. U. Skinner, Esq. [C.].
u. ♂ ad. sk.; *v.* ♂ imm. sk.	Choctum, Vera Paz, Jan. (*O. S.*).	Salvin-Godman Coll.
w. ♂ juv. sk.	Chisec, Vera Paz (*O. S.*).	Salvin-Godman Coll.
x. ♀ ad. sk.	Vera Paz (*O. S.*).	Sclater Coll.
y. ♂ imm. sk.	Angostura, Costa Rica, March 17 (*J. Carmiol*; Sm. no. 39789).	Salvin-Godman Coll.
z. ♂ ad. sk.	Chontales, Nicaragua (*T. Belt*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Chenandega, Nicaragua (*F. Hicks*; Sm. no. 53184).	Salvin-Godman Coll.

2. Guiraca parellina.

Fringilla parellina, *Licht. in Mus. Berol., undè*

Cyanoloxia parellina, *Bp. Consp.* i. p. 502 (1850).

Goniaphea parellina, *Sel. P. Z. S.* 1856, p. 302, 1857, p. 228; *Gray, Hand-l. B.* ii. p. 103, no. 7541 (1870).

Guiraca parellina, *Sel. P. Z. S.* 1859, pp. 365, 378; *id. Cat. Amer. B.* p. 101 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Lawr. Mem. Bost. Soc. Nat. Hist.* ii. p. 276 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 20 (1876); *Boucard, P. Z. S.* 1883, p. 444; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 347 (1885).

Cyanospiza parellina, *Baird, B. N. Amer.* p. 502, pl. lvi. fig. 1 (1858); *id. Mex. Bound. Surv.* ii., *Birds*, p. 17 (1859); *Sumichr. Mem. Bost. Soc. Nat. Hist.* i. p. 551 (1869).

Cyanocompsa parellina, *Cab. J. f. O.* 1861, p. 4.

Passerina parellina, *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 27 (1881).

Adult male. General colour above deep indigo-blue, with ochreous-brown margins to the feathers (remains of winter plumage); lower back, rump, and upper tail-coverts deep cobalt-blue; the long feathers on the side of the rump with concealed subterminal bars of silky white; lesser and median wing-coverts deep blue, the former glistening with cobalt; greater coverts, bastard-wing, primary-coverts, and quills blackish, externally edged with deep blue; tail-feathers black, with deep blue margins; head deep cobalt like the lower back, with a silvery-cobalt lustre on the forehead extending over the eye; lores, feathers round the eye, ear-coverts, cheeks, and sides of face blue-black, with a lustre of bright cobalt forming a patch at the base of the cheeks extending below the eye; entire under surface of body deep blue, including the under wing-coverts and axillaries; on the latter as well as on the under tail-coverts and vent-feathers some remains of whitish terminal bars; quills blackish below, edged with ashy along the inner web: "bill and feet greyish brown; iris brown" (*Sumichrast*). Total length 5 inches, culmen 0·45, wing 2·55, tail 2, tarsus 0·75.

Adult female. General colour above earthy brown, with conspicuous subterminal bars of white on the long feathers of the sides of the rump; wing-coverts dusky brown, edged with the same colour as the back; quills dusky brown, edged with ashy, the inner secondaries with the same colour as the back; tail-feathers dusky brown, with narrow edges of paler brown; head like the back; sides of face, cheeks, and ear-coverts also like the back; the lores dull whitish; under surface of body dark ochreous brown, paler on the throat and on the abdomen, as well as on the axillaries and under wing-coverts. Total length 4·7 inches, culmen 0·55, wing 2·65, tail 2·15, tarsus 0·75.

The *young male in first winter plumage* resembles the adult female, but is darker and more reddish brown, especially on the rump and under surface of the body. One in the Salvin-Godman collection is beginning to assume the full blue plumage by a moult, and not by the abrasion of the brown tips to the feathers as in *G. cærulea*.

Hab. Mexico and Northern Yucatan, with the adjacent islands of Meco and Mugeres.

a. ♂ ad. sk.	Mexico.	Sclater Coll.
b. [♀] ad. sk.	Presidio, W. Mexico, Jan. 28 (*A. Forrer*).	Salvin-Godman Coll.
d. [♂] juv. sk.	Orizaba, Mexico.	Salvin-Godman Coll.
c. ♂ ad. sk.	Jalapa, Mexico (*de Oca*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Jalapa (*de Oca*).	Sclater Coll.
f. ♂ ad. sk.	Merida, Northern Yucatan, Jan. 4 (*G. F. Gaumer*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Meco Island, Nov. 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Mugeres Island, Dec. 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.
i, k. ♂ ad. st.	Mexico.	Purchased.

3. Guiraca cyanea.

The Blue Grosbeak from Angola, *Edwards, N. H. Birds*, iii. pl. 125 (1750).
Le Grosbec bleu d'Angola, *Briss. Orn.* vi., App. p. 88 (1760).
Loxia cyanea, *Linn. Syst. Nat.* i. p. 303 (1766); *Lath. Ind. Orn.* i. p. 374 (1790).
Blue Grosbeak, var. β, *Lath. Gen. Syn.* ii. pt. 1, p. 117 (1783).
Loxia cærulea, var. β, *Gm. Syst. Nat.* i. p. 863 (1788).
Loxia cærulea, var. A, *Lath. Ind. Orn.* i. p. 374 (1790).
Pico grueso azulejo, *Azara, Apunt.* i. p. 438 (1802).
Coccothraustes cyanea, *Vieill. Ois. Chant.* pl. 64 (1805); *Bonn. & Vieill. Enc. Méth.* iii. p. 998 (1823).
Fringilla brissonii, *Licht. Verz. Doubl.* p. 22 (1823); *Neuwied, Beitr. Naturg. Bras.* iii. p. 561 (1830).
Pitylus brissonii, *Gray, Gen. B.* ii. p. 362 (1844); *Hartl. Ind. Azara*, p. 8 (1849).
Cyanoloxia cyanea, *Bp. Consp.* i. p. 503 (1850).
Coccoborus cyaneus, *Cab. Mus. Hein.* Th. i. p. 152 (1850); *Burm. Th. Bras.* iii. p. 237 (1856).
Coccoborus brissonii, *Licht. Nomencl. Av. Berol.* p. 45 (1854).
Cyanocompsa minor, *Cab. J. f. O.* 1861, p. 4.
Guiraca cyanea, *Scl. Cat. Amer. B.* p. 101 (1862); *Pelz. Orn. Bras.* pp. 221, 446 (1871); *Scl. & Salv. P. Z. S.* 1868, p. 627; *Finsch, P. Z. S.* 1870, p. 582; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *iid. P. Z. S.* 1873, p. 264; *iid. P. Z. S.* 1879, p. 604; *Forbes, Ibis*, 1881, p. 335; *Salvin, Cat. Strickl. Coll.* p. 219 (1882); *id. Ibis*, 1885, p. 213; *Berlepsch & Ihering, in Madarász, Zeitschr. ges. Orn.* ii. p. 121 (1885).
Guiraca cyanoides (*nec Lafr.*), *Scl. & Salv. P. Z. S.* 1866, p. 566, 1867, p. 750; *Pelz. Orn. Bras.* p. 222 (1871).
Goniaphea cyanea, *Gray, Hand-l. B.* ii. p. 103, no. 7536 (1870).
Goniaphea minor, *Gray, t. c.* p. 103, no. 7539 (1870).

Adult male. General colour above deep blue, the lower back, rump, and upper tail-coverts being a little brighter blue than the mantle; lesser wing-coverts deep cobalt, forming a patch which contrasts with the back; median and greater coverts, as well as the quills, blackish, edged with blue like the back, a little greyer on the primaries, bastard-wing, and primary-coverts; tail-feathers black, margined with greyish blue; crown of head and neck like the back; the forehead and fore part of the crown glistening bright cobalt, extending laterally a little way above the ear-coverts; lores and feathers in front of and below the eye black, forming a conspicuous spot before the latter; cheeks and ear-coverts black, washed with blue, with a broad mark of brighter cobalt below the eye across the sides of the face; entire under surface of body deep blue, rather greyer on the flanks, the throat decidedly blacker and only slightly washed with blue; axillaries and under wing-coverts like the breast, with a distinct appearance of brighter cobalt near the edge of the wing; quills dusky below, ashy along the inner web: "bill horn-black, somewhat brownish at the tip; feet dark violet-brownish grey; iris brown" (*Burmeister*). Total length 6 inches, culmen 0·6, wing 3, tail 2·55, tarsus 0·75.

Adult female. Different from the male. General colour above dark ochreous brown, slightly more reddish on the lower back, rump, and upper tail-coverts; lesser and median wing-coverts like the back, the greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with ochreous brown, a little paler on the margins of the primaries; tail-feathers dusky brown, edged with ochreous brown; head and neck like the back, the sides of the face a trifle more reddish, especially on the ear-coverts; lores and feathers round the eye deep ochreous buff; entire under surface of body deep ochreous buff, rather paler on the under wing-coverts and axillaries. Total length 6·2 inches, culmen 0·6, wing 2·95, tail 2·55, tarsus 0·85.

The females from Bahia and Pernambuco, collected by Mr. W. A. Forbes, are undoubtedly paler and have the rump conspicuously tawny. The size of the males is rather smaller, but I cannot see any other differences in plumage.

Specimens from Guiana, Amazonia, and Venezuela and Ecuador seem to be rather smaller than Brazilian birds, and the female is dark brown. So far as the Museum specimens are concerned, the females from Pernambuco are peculiar, those from other localities being alike in their uniform dark chocolate-brown plumage.

Hab. Brazil, Amazonia, Guiana, Venezuela, and Ecuador.

a. ♂ imm. sk.	S.E. Brazil.	Sclater Coll.
b, c. ♂ ♀ ad. sk.	Brazil.	Sclater Coll.
d. ♀ ad. sk.	Brazil.	J. Gould, Esq.
e. ♂ imm. sk.	Brazil.	Sclater Coll.
f. ♂ ad. sk.	Brazil.	Salvin-Godman Coll.
g. ♂ ad. sk.	Novo Fribourgo, Prov. of Rio de Janeiro, S.E. Brazil (*J. Vouds*).	Salvin-Godman Coll.
h, i. ♂ ♀ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
k. ♂ ad.; *l*. ♀ ad. sk.	Ypanema, July 17 (*J. Natterer*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Bahia.	Sudbury Museum.
n, o. ♂; *p*. ♀ ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Coll.
q, r. ♂ ♀ ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
s. ♂ ad. sk.	Cayenne.	Sclater Coll.
t, u. ♂ ♀ ad. sk.	R. Oyapock, French Guiana (*Jelski*).	Salvin-Godman Coll.
v. ♂ ad. sk.	British Guiana.	Salvin-Godman Coll.
w. ♂ ad. sk.	Bartica Grove, British Guiana, Sept. 28 (*H. Whitely*).	Salvin-Godman Coll.
x. ♀ ad. sk.	Bartica Grove, Dec. 30 (*H. Whitely*).	Salvin-Godman Coll.
y. ♂ ad. sk.	Bartica Grove, Jan. 20 (*H. Whitely*).	Salvin-Godman Coll.
z. ♂ juv. sk.	Camacusa, March 12 (*H. Whitely*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Camacusa, June 7 (*H. Whitely*).	Salvin-Godman Coll.
b'. ♂ ad. sk.	Caracas, Venezuela, Nov. (*A. Goering*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	Caracas (*A. Goering*).	Sclater Coll.
d'. ♂ ad. sk.	Trinidad.	Purchased.

e'. ♂ ad. sk.	Borba (*J. Natterer*).	Sclater Coll.
f'. ♂ imm. sk.	River Ucayali.	J. Hauxwell, Esq. [C.].
g'. ♀ ad. sk.	Nauta, Peruvian Amazons, Nov. 14.	E. Bartlett, Esq. [C.].
h', i'. ♂ ♀ ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

Subsp. *a*. Guiraca argentina.

Adult male. Similar to *G. cyanea*, but much larger, and having a more extended frontal patch of silvery cobalt, which extends in a narrow eyebrow to the sides of the nape. Total length 6·8 inches, culmen 0·7, wing 3·6, tail 3·5, tarsus 0·9.

Adult female. Similar to the female of *G. cyanea*, but much larger, and altogether a paler bird with the rump light ferruginous brown, in strong contrast to the back. Total length 6·9 inches, culmen 0·75, wing 3·45, tail 3·1, tarsus 0·9.

Hab. Argentine Republic.

a, b. ♂ ♀ ad. sk.	Fuerte de Andelgala, Catamarca, Argentine Republic, Sept. (*E. W. White*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Cosquin, Cordova, Argentine Republic, July 21 (*E. W. White*).	Sclater Coll.
d. ♂ ad. sk.	Cosquin, Aug. 3 (*E. W. White*).	Sclater Coll.
e,f. ♂ ad. sk.	Salta, June 1878.	Henry Durnford, Esq. [C.].
g. ♀ ad. sk.	Tucuman, June 1878.	Henry Durnford, Esq. [C.].

4. Guiraca cyanoides.

Coccoborus cyanoides, *Lafr. Rev. Zool.* 1847, p. 74.
Cyanoloxia cyanoides, *Bp. Consp.* i. p. 502 (1850); *Lawr. Ann. Lyc. N. Y.* vii. p. 297 (1861).
Guiraca, sp., *Scl. P. Z. S.* 1860, p. 293.
Guiraca cyanoides, *Scl. & Salv. P. Z. S.* 1864, p. 352, 1879, p. 506; *Berl. & Tacz. P. Z. S.* 1883, p. 549.

Adult male. General colour above dark indigo-blue, a trifle brighter towards the rump and upper tail-coverts; lesser wing-coverts dark cobalt; remainder of the wing-coverts, bastard-wing, primary-coverts, quills, and tail blackish, edged with the same colour as the back, the primaries margined with greyish blue; head like the back, the forehead dull cobalt, extending backwards over each eye; lores and feathers round the eye black; sides of face, cheeks, and ear-coverts, as well as the entire under surface of the body, dark indigo-blue, with a mark of somewhat brighter blue below the eye and on the fore part of the cheeks; axillaries and under wing-coverts like the breast, the edge of the wing brighter blue. Total length 6·2 inches, culmen 0·8, wing 3·15, tail 2·6, tarsus 0·85.

Adult female. Different from the male. Above uniform rufous-brown, the lower back, rump, and upper tail-coverts like the back; lesser wing-coverts like the back; median and greater coverts dusky

brown, edged with the same colour as the back; bastard-wing, primary-coverts, and quills dusky brown, edged with dull rufous-brown, the inner secondaries more broadly washed with the latter colour; tail-feathers dark brown, washed externally with reddish brown; sides of face and under surface of body deep ferruginous brown, the under wing-coverts and axillaries like the breast. Total length 6·5 inches, culmen 0·8, wing 3, tail 2·5, tarsus 0·9.

Young males at first resemble the old female, and gain the blue plumage by a moult.

This species shows a tendency to merge into *G. concreta*.

Hab. Panama to Colombia and Ecuador.

a, b. ♂ ♀ ad. sk.	Panama (*McLeannan*).	Sclater Coll.
c, d. ♂ ad. et juv. sk.	Lion Hill Station, Panama (*McLeannan*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Bogotá, U.S. Colombia.	Purchased.
f. ♂ ad. sk.	Bogotá, U.S. Colombia.	Salvin-Godman Coll.
g. ♂ ad. sk.	Remedios, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Esmeraldas, Ecuador (*L. Fraser*).	Sclater Coll.

5. Guiraca concreta.

Cyanoloxia concreta, *Dubus, Bull. Acad. Brux.* xxii. p. 150 (1855).
Goniaphea concreta, *Sclater, P. Z. S.* 1856, p. 302, 1857, p. 228; *Gray, Hand-l. B.* ii. p. 103, no. 7540 (1870).
Guiraca concreta, *Scl. P. Z. S.* 1859, p. 378; *Scl. & Salv. Ibis*, 1860, p. 32; *Scl. Cat. Amer. B.* p. 101 (1862); *Salvin, P. Z. S.* 1867, p. 141; *Lawr. Ann. Lyc. N. Y.* ix. p. 102 (1868); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869); *Salv. P. Z. S.* 1870, p. 189; *Scl. & Salv. P. Z. S.* 1870, p. 836; *Salv. Ibis*, 1872, p. 317; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 345 (1885).

Adult male. Blackish with an indigo shade, with scarcely any indication of bright blue on the forehead, cheeks, or wing-coverts. Total length 6 inches, culmen 0·85, wing 3·2, tail 2·7, tarsus 0·9.

Adult female. Similar to the same sex of *G. cyanoides*, but rather more rufous, especially below. Total length 6·3 inches, culmen 0·8, wing 3·05, tail 2·7, tarsus 0·85.

Mexican specimens are much the darkest, and Guatemalan intermediate between those from Mexico and Veragua. As Messrs. Salvin and Godman remark, specimens from Panama, Colombia, and Ecuador show much more blue on the forehead and cheeks; but I feel, in common with those gentlemen, that a perfect series of intermediate links is likely to be found to connect *G. concreta* and *G. cyanoides* (*cf.* Salvin and Godman, Biol. Centr.-Amer., Aves, i. p. 346).

Hab. Central America from Mexico to Veragua.

a. ♂ ad. sk.	Orizaba, Mexico.	Sclater Coll.
b. ♂ ad. sk.	Orizaba, Mexico.	Salvin-Godman Coll.

c, d. ♂ ♀ ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll
e. ♂ imm. sk.	Guatemala.	G. U. Skinner, Esq. [C.].
f. ♀ ad. sk.	Vera Paz, Guatemala (*O. S.*).	Salvin-Godman Coll.
g. ♂ ad.; *h.* ♂ juv. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Choctum.	Osbert Salvin, Esq. [C.].
k. ♂ ad. sk.	Yzabal, Guatemala, June 21 (*O. S.*).	Salvin-Godman Coll.
l, m. ♂ ♀ ad. sk.	Tempate, Nicoya, Costa Rica, March (*E. Arcé*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Tucurriqui, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
o, p. ♂ ♀ ad. sk.	Costa Rica (*J. Carmiol*).	Sclater Coll.
q. ♂ ad.; *r.* ♂ imm. sk.	Bugaba, Chiriqui, Panama (*E. Arcé*).	Salvin-Godman Coll.
s. ♂ ad. sk.	Calovevora, Panama (*E. Arcé*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Santa Fé, Panama (*E. Arcé*).	Salvin-Godman Coll.
u. ♂ juv. sk.	Chitra, Panama (*E. Arcé*).	Sclater Coll.

6. Guiraca glaucocærulea.

Pico grueso azul, *Azara, Apunt.* i. p. 440, no. 19 (1802, *teste Burm.*).
Pyrrhula glaucocærulea, *D'Orb. Voy. Amér. Mérid., Ois.* pl. 50. fig. 2 (1835–44).
Pitylus cyaneus, *Hartl. Ind. Azara*, p. 8 (1847, *ex Azara*).
Cyanoloxia glaucocærulea, *Bp. Consp.* i. p. 503 (1850).
Sporophila glaucocærulea, *Cab. Mus. Hein.* Th. i. p. 152, note (1850).
Coccoborus glaucocærulcus, *Burm. Reis. La-Plata St.* ii. p. 488 (1861).
Goniaphea glaucocærulea, *Gray, Hand-l. B.* ii. p. 103, no. 7538 (1870).
Guiraca glaucocærulea, *Hudson, P. Z. S.* 1870, p. 114; *Pelz. Orn. Bras.* p. 222 (1871)*; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Durnf. Ibis*, 1877, p. 170; *Berlepsch & Ihering in Madarász, Zeitschr. ges. Orn.* 1885, p. 122*.

Adult male. General colour above greyish blue; lesser wing-coverts brighter cobalt, but still of a greyish cast, the median wing-coverts slightly duller; greater coverts, bastard-wing, primary-coverts, quills, and tail-feathers dusky, edged with greyish blue; head like the back, brighter greyish cobalt along the forehead and over the eyes, reaching to above the ear-coverts, which are greyish blue like the upper surface of the body, with a vertical line of greyish cobalt below the eye; lores and a narrow line across the base of the forehead black; entire under surface of body greyish blue; axillaries and under wing-coverts like the breast; quills

* In both these cases the birds examined were immature, and some doubt exists as to the identification. The specimens were from Engenho do Gama and Rio Grande do Sul.

dusky below, ashy along the inner web. Total length 5·5 inches, culmen 0·45, wing 2·9, tail 2·5, tarsus 0·7.

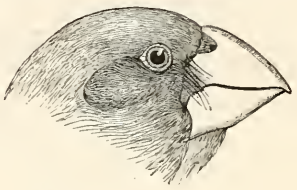
Hab. Southern Brazil, re-occurring in Guiana.

a. ♂ ad. sk.	River Oyapock, French Guiana (*Jelski*).	Sclater Coll.
b. ♂ ad. sk.	Punta Lara, Buenos Ayres, Nov. 1875.	Henry Durnford, Esq. [C.].

14. ORYZOBORUS*.

Type.

Oryzoborus, *Cab. Mus. Hein.* Th. i. p. 151 (1850)..... O. torridus.



Head of *Oryzoborus crassirostris*.

Range. Throughout Central America and South America to Brazil, Amazonia, and Peru.

Key to the Species.

a. Breast chestnut, contrasting with the black throat. *torridus*, p. 77.
b. Breast black like the rest of the under surface.
  a'. Bill yellowish white.
    a''. Size larger; wing 2·6–2·95 inches: under wing-coverts white, with a blackish patch formed by the outer coverts near the base of the primaries.
      a'''. Culmen 0·7: axillaries entirely white .. *maximiliani*, p. 78.
      b'''. Culmen 0·6–0·65: axillaries white, those nearest the breast black ..... *crassirostris*, p. 79.
    b''. Wing 3 inches: axillaries black, as also the under wing-coverts, the lower series of the latter with whitish bases; alar speculum nearly invisible..... *occidentalis*, p. 80. / *nuttingi*, p. 80.
  b'. Bill black.
    c''. Size smaller; wing 2·25 inches: axillaries and under wing-coverts entirely white.... *funereus*, p. 81.
    d''. Larger; wing 2·9 inches: axillaries and under wing-coverts black ..... *atrirostris*, p. 81.

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* Loxia regulus.

Loxia regulus, *Shaw, Lev. Mus.* ii. p. 47, pl.
Goniaphea regulus, *Gray, Hand-l. B.* ii. p. 104, no. 7559 (1870).
Gray considers that this species is an *Oryzoborus*. It has a crimson crest, and looks as if it were made up of *Oryzoborus crassirostris* with a red crest inserted.

1. Oryzoborus torridus.

Black Grosbeak, *Edwards, Gleanings*, iii. pl. 352 (1764).
Loxia angolensis, *Linn. Syst. Nat.* i. p. 303 (1766); *Gm. Syst. Nat.* i. p. 853 (1788).
Loxia torrida, *Scop. Ann.* i. p. 140 (1769); *Gm. Syst. Nat.* i. p. 854 (1788).
Bouvreuil à bec blanc, *Montb. Hist. Nat. Ois.* iv. p. 388 (1778).
Angola Grosbeak, *Lath. Gen. Syst.* ii. pt. 1, p. 145 (1783).
White-billed Grosbeak, *Lath. t. c.* p. 146 (1783).
Pico grueso negro y canela, *Azara, Apunt.* i. p. 444 (1802).
Fringilla torrida, *Licht. Verz. Doubl.* p. 26 (1823); *Neuwied, Beitr. Naturg. Bras.* iii. p. 567 (1830).
Coccothraustes rufiventris, *Bonn. et Vieill. Enc. Méth.* iii. p. 1014 (1823).
Loxia nasuta, *Spix, Av. Bras.* ii. p. 45, tab. 58. figs. 1, 2 (1824).
Coccoborus magnirostris, *Swains. Classif. B.* ii. p. 111 (1837).
Guiraca magnirostris, *Gray, Gen. B.* ii. p. 357 (1844).
Pitylus torridus, *Gray, Gen. B.* ii. p. 362 (1844); *Hartl. Ind. Azara*, p. 8 (1847).
Spermophila nasuta, *Gray, Gen. B.* ii. p. 385 (1844).
Sporophila torrida, *Bp. Consp.* i. p. 499 (1850).
Oryzoborus torridus, *Cab. Mus. Hein.* Th. i. p. 151 (1850); *Burm. Th. Bras.* iii. p. 238 (1856); *Scl. P. Z. S.* 1858, p. 455; *id. Cat. Amer. B.* p. 102 (1862); *Scl. & Salv. P. Z. S.* 1866, p. 181, 1867, pp. 572, 750, 977, 1868, p. 167; *Finsch, P. Z. S.* 1870, p. 583; *Pelz. Orn. Bras.* p. 222 (1871); *Scl. & Salv. P. Z. S.* 1873, pp. 185, 264; *iid. Nomencl. Av. Neotr.* p. 28 (1873); *iid. P. Z. S.* 1879, p. 604; *Tacz. P. Z. S.* 1882, p. 16; *Salv. Cat. Strickl. Coll.* p. 220 (1882); *id. Ibis*, 1885, p. 214; *Berl. & Ihering, in Madarász, Z. ges. Orn.* ii. p. 122 (1885).
Coccoborus torridus, *Licht. Nomencl. Av. Berol.* p. 44 (1854); *Tschudi & Cab. Faun. Peruan., Aves*, p. 223 (1855).
Goniaphea torrida, *Gray, Hand-l. B.* ii. p. 105, no. 7552 (1870).

Adult male. General colour above glossy black; all wing-coverts black, the lesser coverts round the bend of the wing white; quills black, with a white speculum formed by the extreme base of the outer web of the primaries; tail-feathers black; head all round black; throat and fore neck black; breast and abdomen deep chestnut, as also the sides of body and flanks; thighs black; under tail-coverts chestnut, the long ones black, externally more or less chestnut; under wing-coverts and axillaries white; quills below blackish, the inner edge of the quills conspicuously white: "bill horn-black, with paler edges; feet blackish brown; iris greyish brown" (*Neuwied*). Total length 5 inches, culmen 0·5, wing 2·35, tail 2·1, tarsus 0·6.

Adult female. Different from the male. General colour above dark olive-brown, becoming more reddish brown on the lower rump and upper tail-coverts; wing-coverts dark brown, edged with reddish brown; bastard-wing, primary-coverts, and quills blackish brown, narrowly edged with dark olive-brown, a little more reddish on the secondaries; tail-feathers dark brown, edged with dull reddish brown; crown of head like the back; lores fulvescent; eyelid dull whitish;

ear-coverts dark brown like the head; under surface of body pale reddish brown or light cinnamon, rather darker brown on the cheeks, fore neck, and chest; centre of abdomen and sides of body paler and more fulvescent; chin buffy whitish; under wing-coverts and axillaries white, with a tinge of olive-yellow; quills below dusky, ashy along their inner edge. Total length 5 inches, culmen 0·5, wing 2·35, tail 2·15, tarsus 0·55.

Hab. Brazil, Amazonia, Guiana, Venezuela, and Ecuador.

a. ♂ ad. sk.	South America.	Sclater Coll.
b. ♂ ad. sk.	Brazil.	Sclater Coll.
c. ♂ ad. sk.	Ypanema, Brazil, July 1821 (*J. Natterer*).	Salvin-Godman Coll.
d, e. ♂ ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
f, g. ♂; *h, i.* ♀ ad. sk.	Pernambuco, Brazil (*W. A. Forbes*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Para, Oct. 1848 (*A. R. Wallace*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Para.	R. Graham, Esq. [P.].
m. ♂ ad. sk.	Pebas, E. Peru, April 2, 1867 (*J. Hauxwell*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Roraima, British Guiana, 3500 feet, Dec. 21, 1883 (*H. Whitely*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Roraima, Jan. 23, 1884 (*H. W.*).	Salvin-Godman Coll.
p. ♂ imm. sk.	Bartica Grove, British Guiana, Nov. 27, 1879 (*H. W.*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Bartica Grove, Dec. 21, 1879 (*H. W.*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Camacusa, British Guiana, June 9, 1882 (*H. W.*).	Salvin-Godman Coll.
s. [♀] ad. sk.	Pilar, Venezuela, March 1867 (*A. Goering*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.
u. ♂ ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

2. Oryzoborus maximiliani.

Fringilla crassirostris, *Neuwied, Beitr. Naturg. Bras.* iii. p. 564 (1830, *nec Gm.*).

Oryzoborus maximiliani, *Cab. Mus. Hein.* Th. i. p. 151, note (1850); *Burm. Th. Bras.* iii. p. 238 (1856); *Scl. Cat. Amer. B.* p. 102 (1862); *Pelz. Orn. Bras.* p. 222, note (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Salv. Cat. Strickl. Coll.* p. 220 (1882).

Goniaphea maximiliani, *Gray, Hand-l. B.* ii. p. 104, no. 7554 (1870).

Adult male. Entirely glossy black above and below; wings also black, a little browner towards their ends; a large alar speculum formed by the white base to the outer webs of the primaries, 0·3 inch in length; axillaries and under wing-coverts white, the edge of the wing black, and a small spot of blackish formed by the outer greater series below, and occurring at the base of the primaries;

quills blackish below, white along the inner web: "bill greyish brown, the lower mandible paler; feet dark brownish flesh-colour; iris greyish brown" (*Neuwied*). Total length 5·8 inches, bill from gape 0·6, culmen 0·7, wing 2·95, tail 2·55, tarsus 0·75.

Hab. Southern Brazil.

a. ♀ ad. sk.	[Brazil.]	Sclater Coll.
b. ♂ ad. sk.	Rio.	Sclater Coll.
c. ♂ ad. sk.	Rio.	Salvin-Godman Coll.

3. Oryzoborus crassirostris.

Thick-billed Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 148 (1783).
Loxia crassirostris, *Gm. Syst. Nat.* i. p. 862 (1788, *ex Lath.*).
Spermophila crassirostris, *Gray, Gen. B.* ii. p. 385 (1844).
Coccoborus ater, *Cab. in Schomb. Reis. Guian.* iii. p. 678 (1848).
Sporophila crassirostris, *Bp. Consp.* i. p. 499 (1850).
Oryzoborus crassirostris, *Sel. Cat. Amer. B.* p. 102 (1862); *Scl. & Salv. P. Z. S.* 1866, p. 181, 1867, p. 750; *Pelz. Orn. Bras.* p. 223 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Salv. Cat. Strickl. Coll.* p. 220 (1882); *id. Ibis*, 1885, p. 214; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 348 (1885).
Oryzoborus melas, *Scl. & Salv. P. Z. S.* 1867, p. 979, 1869, p. 253, 1873, p. 264; *id. Nomencl. Av. Neotr.* p. 264 (1873).
Goniaphea crassirostris, *Gray, Hand-l. B.* ii. p. 104, no. 7553 (1870).
Goniaphea melas, *Gray, t. c.* p. 104, no. 7558 (1870).
Oryzoborus occidentalis (*nec Scl.*), *Scl. & Salv. P. Z. S.* 1879, p. 506.

Adult male. Entirely glossy black, the quills somewhat browner at the tips, with a large alar speculum, 0·25 inch long, at the base of the primaries; under wing-coverts white; the edge of the wing black, and a spot of dusky black on the lower greater coverts at the base of the primaries; axillaries white, a few nearest the body black like the breast. Total length 5·5 inches, culmen 0·65, bill from gape 0·6, wing 2·85, tail 2·25, tarsus 0·65.

Adult female. Umber-brown with an olive shade; under surface of body deep ochreous, rather paler on the throat; the sides of the breast more ashy olive; under wing-coverts buffy white, with a strong tinge of yellow along the edge of the wing. Total length 5·3 inches, culmen 0·6, wing 2·6, tail 2·1, tarsus 0·7.

Hab. Amazonia, Guiana, Venezuela, and Colombia.

a. ♂ ad. sk.	Georgetown, British Guiana (*Brown*).	Sclater Coll.
b. ♂ ad. sk.	Bartica Grove, British Guiana, April 28, 1880 (*H. Whitely*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Bartica Grove, June 5, 1880 (*H. Whitely*).	Salvin-Godman Coll.
d, *e*. ♂ ♀ ad. sk.	Trinidad.	Sclater Coll.
f. ♂ ad. sk.	S. Esteban, Venezuela (*A Goering*).	Sclater Coll.
g, *h*. ♂ ♀ ad. sk.	Medellin, U. S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.

k. ♂ ad. sk.	Lamalonga, Brazil, Dec. 7, 1830 (*J. Natterer*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Pebas, E. Peru, April 2, 1867 (*J. Hauxwell*).	Sclater Coll. (Type of *O. melas*.)
m. ♀ ad. sk.	Pebas, Feb. 27, 1867 (*J. Hauxwell*).	Sclater Coll.
n. ♂ ad. sk.	Pebas, April 2, 1867 (*J. Hauxwell*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Nauta, Peruvian Amazons, April 11, 1865.	E. Bartlett [C.].

4. Oryzoborus occidentalis.

Oryzoborus occidentalis, *Scl. P. Z. S.* 1860, p. 276; *id. Cat. Amer. B.* p. 102 (1862); *Scl. & Salv. P. Z. S.* 1873, p. 28.
Goniaphea occidentalis, *Gray, Hand-l. B.* ii. p. 104, no. 7557 (1870).

Adult male (type of species). Entirely glossy black above and below, with a tiny white speculum at the base of the primaries, almost concealed by the coverts; axillaries black; under wing-coverts for the most part black, the lower series ashy white at the base, black at the ends. Total length 5·3 inches, culmen 0·65, wing 3, tail 2·1, tarsus 0·7.

Female. Unknown.

Hab. Colombia and Ecuador.

a. [♂] ad. sk.	Bogotá.	Sclater Coll.
b. ♂ ad. sk.	Babahoyo, Aug. 1859 (*L. Fraser*).	Sclater Coll. (Type of species.)

5. Oryzoborus nuttingi.

? Oryzoborus othello, *Bp. Consp.* i. p. 498 (1850).
Oryzoborus nuttingi, *Ridgw. Proc. U. S. Nat. Mus.* vi. p. 401 (1884); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 348 (1885).

Adult male. Black; quills greyish white at the base of the inner web; under wing-coverts black; bill stout, whitish; feet leaden black. Total length 5·5 inches, wing 2·7, tail 2·7, tarsus 0·7. (*S. & G.*)

Adult female. Dark umber-brown above; below cinnamon-brown; under wing-coverts fulvescent; bill dusky blackish; feet dusky. (*S. & G.*)

Messrs. Salvin and Godman, who have examined the typical specimens of *O. nuttingi*, write as follows (and I quite agree that the species will in all probability prove to be *O. occidentalis*):—"Except that the bill is decidedly large, the male only differs from that sex of *O. occidentalis* in the almost total absence of the white wing-speculum, a little white being still visible on raising the coverts. In *O. occidentalis* from Western Ecuador, the speculum is quite small, and in an example from Colombia it is still smaller; hence we doubt if *O. nuttingi* will prove a definite species when a larger series of specimens are examined."

Hab. Nicaragua.

6. Oryzoborus funereus.

Oryzoborus funereus, *Scl. P. Z. S.* 1859, p. 378; *id. & Salv. Ibis*, 1860, p. 398; *Scl. Cat. Amer. B.* p. 102 (1862); *Salv. P. Z. S.* 1867, p. 141, 1870, p. 189; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *id. P. Z. S.* 1879, p. 506; *Ridgw. & Nutting, Pr. U.S. Nat. Mus.* vi. p. 400 (1883); *Salv. & Godm. Biol. Cent.-Amer., Aves*, i. p. 349 (1886).

Oryzoborus æthiops, *Scl. P. Z. S.* 1860, pp. 88, 276; *Lawr. Ann. Lyc. N. Y.* vii. p. 333 (1861); *Scl. Cat. Amer. B.* p. 102 (1862).

Goniaphea funerea, *Gray, Hand-l. B.* ii. p. 104, no. 7556 (1870).

Goniaphea æthiops, *Gray, t. c.* p. 104, no. 7555 (1870).

Oryzoborus salvini, *Ridgw. Pr. U.S. Nat. Mus.* vi. p. 400 (1883).

Adult male (type of *O. funereus*). Glossy black above and below, with a small alar speculum 0·1 inch long, formed by the white base to the outer web of the primaries; axillaries and under wing-coverts white, as well as the edge of the wing; quills blackish, white along the inner web. Total length 4·8 inches, culmen 0·5, bill from gape 0·45, wing 2·25, tail 2, tarsus 0·65.

Adult female. Scarcely to be distinguished from the female of *O. torridus*, except by its somewhat deeper rufous underneath. Total length 4·5 inches, culmen 0·55, wing 2·15, tail 2·1, tarsus 0·7.

Hab. Central America from Mexico to Panama, extending to Colombia and Ecuador.

a. ♂ ad. sk.	Oaxaca, Mexico, April 1859 (*A. Boucard.*)	Sclater Coll. (Type of species.)
b. ♀ ad. sk.	Honduras.	Mr. C. Dyson [C.].
c. ♂ ad. sk.	Guatemala.	O. Salvin, Esq. [C.].
d. ♂ ad. sk.	Choctum, Vera Paz, Guatemala, Jan. 1860 (*O. S.*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Choctum, Feb. 1862 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Veragua, Panama (*E. Arcé*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Santa Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Minca, U. S. Colombia.	Sclater Coll.
i. ♂ ad. sk.	Medellin, U. S. Colombia (*T. K. Salmon*).	Sclater Coll.
k, l. ♂ ♀ ad. sk.	Medellin, U. S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Nanegal, Ecuador, Feb. 1859 (*L. Fraser*).	Sclater Coll. (Type of *O. æthiops.*)
n. ♂ ad. sk.	Babahoyo, Ecuador, Sept. 1859 (*L. Fraser*).	Sclater Coll.
o. ♀ ad. sk.	Babahoyo, Ecuador, Aug. 1859 (*L. Fraser*).	Sclater Coll.
p. ♀ ad. sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.

7. Oryzoborus atrirostris.

Oryzoborus atrirostris, *Scl. & Salv. P. Z. S.* 1878, p. 136.

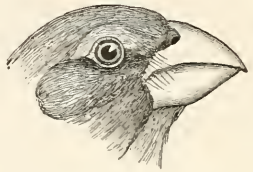
Uniform black, with a steel gloss; primaries white at base, forming

a small speculum nearly hidden by the coverts; bill short, black; tail slightly rounded. Total length 6 inches, wing 2·9, tail 2·7, tarsus 0·75. (*Scl. & Salv.* l. c.)

Hab. Moyobamba, Peru.

15. LOXIGILLA.

	Type.
Loxigilla, *Less. Traité*, p. 443 (1831)	L. noctis.
Pyrrhulagra, *Bp. Consp.* i. p. 492 (1850, *ex Schiff. MSS.*)	L. portoricensis.
Loxipasser, *Bryant, Proc. Bost. Soc. N. H.* x. p. 254 (1866)	L. anoxantha.



Head of *Loxigilla violacea.*

Range. Greater and Lesser Antilles, and (according to Mr. G. N. Lawrence) the mainland in the vicinity of the Essequibo River and Berbice.

Key to the Species.

a. Back black.
  a'. Crown of head black; throat rufous.
    a''. Larger; wing over 3 inches: loral region black; over the eye a broad mark of rufous ..... *violacea*, p. 82.
    b''. Smaller; wing 2·4–2·9 inches: loral region black, surmounted by a spot of rufous ..... *noctis*, p. 84. / *propinqua*, p. 85.
  b'. Crown of head chestnut; forehead black .... *portoricensis*, p. 87. / *grandis*, p. 87.
b. Back yellowish olive; head black like the entire throat and breast ..... *anoxantha*, p. 85.

1. Loxigilla violacea.

The Purple Grosbeak, *Catesby, N. H. Carol.* i. p. 40, pl. 40 (1731); *Lath. Gen. Syn.* ii. pt. 1, p. 117 (1783).
Le Bouvreuil violet de Bahama, *Briss. Orn.* iii. p. 326 (1760).
Loxia violacea, *Linn. Syst. Nat.* i. p. 306 (1766).
Bec-rond violet à gorge et sourcils rouges, *Month. Hist. Nat. Ois.* iv. p. 396 (1778).
Rufous throated Tanager, *Lath. Gen. Syn.* ii. pt. 2, p. 241 (1783).
Tanagra ruficollis, *Gm. Syst. Nat.* i. p. 894 (1788).
Pyrrhula superciliosa, *Vieill. N. Dict. d'Hist. Nat.* iv. p. 300 (1816); *Gray, Gen. B.* ii. p. 386 (1844).

Pyrrhula aurantiicollis, *Vieill. Gal. Ois.* i. p. 62, pl. 55 (1825).
Pyrrhula violacea, *Gosse, B. Jamaica*, p. 254 (1847).
Pyrrhula rufobarbata, *Hahn & Küster, Vög. aus Asien etc.* Lief. vii. Taf. 6 (1850).
Pyrrhulagra violacea, *Bp. Consp.* i. p. 493 (1850).
Loxigilla violacea, *Sclater, P. Z. S.* 1857, p. 231, 1861, p. 74; *id. Cat. Amer. B.* p. 102 (1862); *Ridgw. Proc. U. S. Nat. Mus.* i. p. 250 (1878); *A. & E. Newt. Handb. Jamaica*, p. 104 (1880); *Salv. Cat. Strickl. Coll.* p. 219 (1882); *Tristr. Ibis*, 1884, p. 168; *Cory, List B. W. Indies*, p. 12 (1885); *id. Auk*, iii. p. 203 (1886).
Goniaphea violacea, *Gray, Hand-l. B.* ii. p. 104, no. 7652 (1870).
Sporophila violacea, *Giebel, Thes. Orn.* iii. p. 523 (1877).
Loxigilla violacea, *β.* bahamensis, *Ridgw. Proc. U. S. Nat. Mus.* i. p. 250 (1878).
Loxigilla bahamensis, *Cory, B. Bahamas*, p. 69 (1880); *id. List B. W. Indies*, p. 12 (1885); *id. Auk*, iii. p. 203 (1886).

Adult male. General colour above and below black, the quills and tail-feathers a little browner on the inner webs; over the eye a line of bright brick-red; throat, vent, and under tail-coverts also brick-red or deep chestnut; axillaries white, tinged with sulphur-yellow; under wing-coverts white, except those round the edge of the wing, which are black; quills blackish below, ashy along the inner web. Total length 6·4 inches, culmen 0·6, bill from gape 0·6, wing 3·2, tail 2·75, tarsus 0·8.

Adult female. Different from the male. Entirely ashy brown above, tinged with olive; wing-coverts, quills, and tail-feathers dusky brown, edged with the same colour as the back; sides of face and entire under surface of body olive-brown, ashy in the centre of the abdomen; a line of pale rufous above the eye; centre of throat also washed with pale rufous; under tail-coverts also pale rufous; axillaries and under wing-coverts white tinged with olive-yellow. Total length 6·2 inches, culmen 0·55, wing 2·7, tail 2·4, tarsus 0·75.

Young males at first resemble the adult female and gradually assume the black plumage.

Mr. Ridgway has separated the Bahama bird as a distinct race, characterized by its more lustrous black plumage and by the more restricted throat-patch. In the Museum series I cannot detect the first of these characters, and the second is not well-marked enough to distinguish the two supposed races. Mr. Cory writes:—"The Jamaica bird differs from the Bahama form in being somewhat small; the red of the throat is lighter, and the under wing-coverts are grey, instead of dull white. It seems to represent a fairly good geographical race."

Hab. Bahamas, Jamaica, Haiti, and San Domingo.

a. ♂ imm. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
b. ♂ ad. sk.	S. Domingo.	Sclater Coll.
c. ♂ ad. st.	Jamaica.	Purchased.
d. Juv. sk.	Jamaica.	Sclater Coll.
e. ♀ ad. sk.	St. Ann's, Jamaica, Aug. 26.	Salvin-Godman Coll.
f. ♂ ad.; *g.* Juv. sk.	Spanishtown, Jamaica (*W. T. March*; Sm. no. 38060).	Salvin-Godman Coll.

h. ♂ ad. sk.	Moneague, Jamaica, Feb. 20, 1865.	Bryant Coll.
i. ♂ ad. sk.	Moneague, Feb. 1865 (*Dr. H. Bryant*).	Sclater Coll.
k. ♂ ad. ; *l*, *m.* ♀ imm. sk.	Bahamas (*Blake*).	Sclater Coll.
n. ♂ juv. sk.	Bahamas.	Bryant Coll.
o. ♂ ad. sk.	Bahamas (*Dr. H. Bryant*; Sm. no. 11944).	Salvin-Godman Coll.

2. Loxigilla noctis.

The Black Sparrow, *Sloane, Nat. Hist. Jamaica*, ii. p. 311 (1725).
Le Père noir, *Briss. Orn.* iii. p. 118, pl. vii. fig. 1 (1760).
Fringilla noctis, *Linn. Syst. Nat.* i. p. 320 (1766).
? Le Père noir de la Martinique, *Daubent. Pl. Enl.* iv. pl. 201. fig. 1.
Rufous-chinned Finch, *Lath. Gen. Syn.* ii. pt. 1, p. 267 (1783).
Fringilla rufobarbata, *Jacq. Beitr.* p. 11 (1784).
Fringilla martinicensis, *Gm. Syst. Nat.* i. p. 909 (1788).
Loxia haitii, *Ricord, Rev. Zool.* 1838, p. 167.
Spermophila haitii, *Gray, Gen. B.* ii. p. 386 (1844).
Spermophila noctis, *Gray, Gen. B.* ii. p. 386 (1844); *Gosse, B. Jamaica*, p. 247, pl. 62 (1847).
Pyrrhula robinsonii, *Gosse, B. Jamaica*, p. 259 (1847).
Pyrrhulagra noctis, *Bp. Consp.* i. p. 493 (1850).
Loxigilla noctis, *Scl. Cat. Amer. B.* p. 102 (1862); *E. C. Taylor, Ibis*, 1864, p. 167; *Scl. P. Z. S.* 1871, pp. 267, 270; *Semper, P. Z. S.* 1872, p. 648; *Scl. P. Z. S.* 1874, p. 175; *Lawr. Proc. U. S. Nat. Mus.* i. pp. 57, 191, 233, 239, 269, 355, 457, 487 (1878–79); *Scl. P. Z. S.* 1879, p. 764; *Lister, Ibis*, 1880, p. 40; *Cory, B. Bahamas*, p. 87 (1880); *Grisdale, Ibis*, 1882, pp. 486, 487; *Cory, List B. West Indies*, p. 12 (1885); *id. Auk*, iii. p. 204 (1886).
Goniaphea noctis, *Gray, Hand-l. B.* ii. p. 104, no. 7561 (1870).
Sporophila noctis, *Giebel, Thes. Orn.* iii. p. 520 (1877).
Loxigilla noctis sclateri, *Allen, Bull. Nutt. Orn. Club*, v. p. 166 (1880); *Cory, List B. West Indies*, p. 12 (1885); *id. Auk*, iii. p. 204 (1886).

Adult male. Entirely black both above and below, including the wings and tail; a small supraloral spot of dull brick-red; throat bright brick-red; under tail-coverts black; axillaries black; under wing-coverts white except those near the edge of the wing, which are black: quills blackish below, ashy along the edge of the inner web: "bill and legs black" (*Cory*). Total length 5 inches, culmen 0·5, wing 2·9, tail 2, tarsus 0·75.

Adult female. Different from the male. Above olivaceous brown, rather more reddish on the upper tail-coverts, and slightly tinged with reddish on the forehead; lesser wing-coverts like the back; median and greater wing-coverts dusky brown, edged with pale rufous; quills dusky brown, the primaries margined with olive, the inner secondaries with pale rufous like the greater coverts; tail-feathers dusky brown, edged with pale reddish brown; lores reddish buff; ear-coverts olive-brown; chin ashy whitish; cheeks, sides of neck, throat, and breast ashy grey, a little browner on the sides of

the body and flanks; thighs dull ashy; abdomen pale ashy; under tail-coverts light ochreous rufous; axillaries light olive; under wing-coverts white slightly tinged with buff; edge of the wing pale rufous; quills dusky below, ashy along the inner web. Total length 4·2 inches, culmen 0·5, wing 2·3, tail 1·7, tarsus 0·75.

The female from Martinique is much darker everywhere than the female from S. Lucia, while those from Barbadoes are extremely pale.

Mr. Allen has separated the form from Santa Lucia as *Loxigilla sclateri*, on account of the smallness of the rufous supraloral mark, which is almost entirely absent in some examples, and on account of the under tail-coverts being black. One specimen, collected by Mr. Semper in the above-mentioned island, shows these characters; but another bird has the supraloral mark well pronounced, and has also some rufous on the under tail-feathers, so that I do not think there is any finality to the characters selected by Mr. Allen. This, too, seems to be Mr. Cory's opinion.

Hab. Lesser Antilles.

a. ♂ ad. sk.	Antilles.	Sclater Coll.
b, *c*. ♀ ad. sk.	Barbadoes.	Sir R. Schomburgk [P.].
d. ♀ ad. sk.	Barbadoes (*Sir G. Briggs*).	Sclater Coll.
e. ♂ ad. sk.	Guadeloupe, Sept. (*F. A. Ober*).	Salvin-Godman Coll.
f, *g*. ♂ ♀ ad. sk.	Dominica (*F. A. Ober*).	Sclater Coll.
h. ♀ ad. sk.	Martinique (*F. A. Ober*).	Sclater Coll.
i. ♀ ad. sk.	Martinique (*F. A. Ober*).	Salvin-Godman Coll.
k, *l*. ♂ ♀ ad. sk.	Santa Lucia (*G. Semper*).	Sclater Coll.
m, *n*. ♂ ♀ ad sk.	Santa Lucia (*G. Semper*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Montserrat (*Sturge*).	Salvin-Godman Coll.
p, *q*. ♂ ad. st.	Antilles.	Purchased.

3. Loxigilla propinqua.

Loxigilla noctis, var. propinqua, *Lawr. Proc. U. S. Nat. Mus.* i. p. 58 (1878).

"Similar to *L. noctis*, but very much smaller. Length 4½ inches (instead of 5½), wing 2⅝ (3), tail 2 (2⅜), tarsus ⅝ (¾). The bill of the Guiana bird is much smaller, the under mandible of a brownish horn-colour, being black in the West-Indian bird; the under tail-coverts are of a paler rufous; the rufous of the throat is more restricted, and the superciliary line extending beyond the eye." (*Lawrence.*)

Hab. Essequibo River and Berbice, Guiana.

4. Loxigilla anoxantha.

Spermophila anoxantha, *Gosse, B. Jamaica*, p. 247, pl. 62 (1847).
Loxigilla anoxantha, *Scl. P. Z. S.* 1861, p. 74; *id. Cat. Amer. B.* p. 102 (1862); *March, Pr. Philad. Acad.* 1863, p. 297; *A. & E. Newton, Handb. Jamaica*, 1881, p. 104; *Salvin, Cat. Strickl. Coll.* p. 219 (1882); *Cory, List B. W. Indies*, p. 12 (1885); *id. Auk*, iii. p. 203 (1886).

Loxipasser anoxantha, *Bryant, Proc. Bost. Soc. N. H.* x. p. 254 (1866).
Goniaphea anoxantha, *Gray, Hand-l. B.* ii. p. 104, no. 7563 (1870).
Sporophila anoxantha, *Giebel, Thes. Orn.* iii. p. 518 (1877).

Adult male. General colour above yellowish green, glossed with golden yellow on the mantle, upper back, and upper tail-coverts; lesser wing-coverts bright golden yellow, forming a large shoulder-patch; median and greater coverts dusky, washed externally with yellowish green; bastard-wing, primary-coverts, and quills dusky, edged with yellowish green, the secondaries more broadly; tail-feathers dusky, externally washed with yellowish green; crown of head and nape sooty black, forming a hood; lores, feathers round the eye, ear-coverts, cheeks, throat, and breast sooty black, descending on to the abdomen, which is ashy grey, tinged with olive; sides of body and flanks ashy, washed with yellowish green; thighs dull yellowish green; under tail-coverts chestnut; under wing-coverts yellow; axillaries yellowish-green like the sides of the body; quills below dusky, whitish along their inner edge: "bill black; feet blackish flesh-colour; iris hazel" (*P. H. Gosse*). Total length 4·6 inches, culmen 0·4, wing 2·5, tail 1·8, tarsus 0·6.

Adult female. Wants the black head of the male, and otherwise differs. General colour above yellowish green, with a golden gloss on the mantle; wings and tail as in the male; crown of head green like the back, slightly more dusky; sides of face, ear-coverts, cheeks, throat, and under surface of body dull ashy grey, slightly washed with olive, the abdomen paler; sides of body and flanks like the breast; under tail-coverts pale rufous, the longer ones fulvescent; under wing-coverts and axillaries yellow, whitish at the base; quills below dusky, ashy whitish along the inner edge. Total length 4 inches, culmen 0·45, wing 2·3, tail 1·65, tarsus 0·6.

The extent of the black on the abdomen varies with individuals, as it sometimes extends down to the vent, while in other specimens the abdomen is ashy olive, with a blackish shade down the centre of the body. In the latter specimens the black of the head is somewhat washed with olive, and the back is uniform yellowish green, without any golden gloss, and thus more resembling the female. Such specimens are probably young males in their first full plumage, which doubtless grows blacker with age.

Hab. Jamaica.

a, b. ♂ ♀ ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.]. (Types of species.)
c. ♂ ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.].
d. ♂ ad. sk.	Jamaica (*Gosse*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Jamaica (*W. Osburn*).	Salvin-Godman Coll.
f. ♂ ad. sk	St. Anne's, Jamaica, March 1866 (*W. March*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Jamaica.	Sclater Coll.
h. ♀ ad. sk; *i.* ♀ juv. sk.	Jamaica (*W. March*).	Sclater Coll.

5. Loxigilla portoricensis.

Loxia portoricensis, *Daud. Traité*, ii. p. 411 (1809).
Pyrrhula aurantiicolis, *Vieill. N. Dict. d'Hist. Nat.* iv. p. 300 (1816).
Pitylus portoricensis, *Gray, Gen. B.* ii. p. 362 (1848).
Pyrrhulagra portoricensis, *Bp. Consp.* i. p. 493 (1850).
Loxia (Pyrrhulagra) portoricensis, *Bryant, Proc. Bost. Soc. Nat. Hist.* x. p. 254 (1866).
Sporophila portoricensis, *Giebel, Thes. Orn.* iii. p. 522 (1877).
Loxigilla portoricensis, *Cory, B. W. Indies*, p. 12 (1885); *id. Auk*, iii. p. 205 (1886).

Adult male. "A narrow line of black on the forehead; top of the head chestnut rufous, separated at the nape by the black of the back, the black colour dividing it like a ridge; throat and under tail-coverts chestnut rufous, rest of plumage black; under wing-coverts dull white; bill and feet black." (*Cory.*)

"*Female.* Similar to the male, possibly somewhat duller in coloration." (*Cory.*)

"Length of skin 7·5 inches, wing 3·5, tail 3·0, tarsus 0·95." (*Cory.*)

Hab. Porto Rico.

6. Loxigilla grandis.

Loxigilla portoricensis, var. grandis, *Lawr. Proc. U. S. Nat. Mus.* vol. iv. p. 204 (1881).
Loxigilla portoricensis grandis, *Cory, List B. W. Indies*, p. 12 (1885); *id. Auk*, iii. p. 206 (1886).

Male. Larger than *Loxigilla portoricensis*, and having the rufous-chestnut colouring darker. Length 8 inches, wing 4·25, tail 3·25, tarsus 1.

Hab. Island of St. Christopher.

16. NEORHYNCHUS*.

Type.

Callirhynchus, *Bp. C. R.* xlii. p. 822 (1856, *nec Less.*) . . . .
Neorhynchus, *Sclater, P. Z. S.* 1869, p. 147 (*nom. emend.*) . . N. nasesus.

This genus is closely allied to *Spermophila*, and is in fact little more than a thick-billed form of that large genus.

Head of *Neorhynchus nasesus*, ♂.

Range. Peru and Ecuador.

* Two other species which I have not succeeded in identifying are given by Bonaparte, and by Gray in the 'Hand-list,' as follows:—
N. rufescens (*V.*); *Gray, Hand-l. B.* i. p. 107, no. 7622 (1870).
N. peruvianus (*Less.*); *Gray, t. c.* p. 107, no. 7623 (1870).

1. Neorhynchus nasesus.

Callirhynchus masesus, *Bp. C. R.* xlii. p. 822 (1856).
Neorhynchus nasesus, *Scl. P. Z. S.* 1869, p. 147, pl. 12; *Tacz. P. Z. S.* 1874, p. 520, 1877, p. 320; *Salv. Cat. Strickl. Coll.* p. 223 (1882); *Berlepsch & Tacz. P. Z. S.* 1883, pp. 537, 550.
Gyrhinorhynchus masesus, *Gray, Hand-l. B.* ii. p. 107, no. 7625 (1870).
Sporophila masesus, *Giebel, Thes. Orn.* iii. p. 521 (1877).

Adult male. General colour above ashy brown; lesser wing-coverts like the back; median and greater coverts blackish brown, edged with whity brown and tipped with white, forming a double wing-bar, broader on the median coverts; bastard-wing, primary-coverts, and quills blackish brown, edged with ashy brown, hoary towards the end of the primaries; upper tail-coverts dark ashy; tail-feathers blackish brown, edged with ashy brown; crown of head and hind neck dark ashy grey, contrasting slightly with the back; lores, feathers round the eye, and ear-coverts also dark ashy grey, with an indistinct spot of white below the eye; cheeks ashy grey, the hinder part white, forming a broad streak, which extends on to the sides of the neck; fore neck and chest ashy brown, black on the sides; breast and abdomen white, the sides of the body and flanks ashy brown; thighs and under tail-coverts white; under wing-coverts and axillaries white, the latter tinged with yellow; quills below dusky, ashy whitish along the inner edge: "bill horn-colour; feet clear horn-colour; iris dark brown" (*Jelski*). Total length 4·3 inches, culmen 0·5, wing 2·5, tail 1·75, tarsus 0·65.

The male in fresh plumage (December and January) is distinguished by the complete absence of the dark spots on the top of the head; by the grey rather than the ashy shade of the upper part of the body taking a slightly brownish tint on the back and rump; by the bands on the wings being less pronounced and isabelline colour, instead of being white; the black of the throat less intense and of a sooty colour; the white of the underparts more or less washed with isabelline, upper mandible slightly brownish. (*Taczanowski.*)

Adult female. General colour above uniform brown; lesser wing-coverts like the back; median and greater coverts dark brown, edged with whity brown; bastard-wing, primary-coverts, and quills dark brown, narrowly edged with whity brown, the inner secondaries with warmer brown like the back; upper tail-coverts like the back; tail-feathers dark brown, edged with whity brown; crown of head brown like the back; lores and an indistinct eyebrow of pale brown; ear-coverts and cheeks pale brown; throat very pale fulvous brown, like the fore neck; breast and abdomen dull white; sides of body and flanks pale fulvous brown; thighs and under tail-coverts white, slightly tinged with fulvous; under wing-coverts and axillaries white; quills below dusky brown, ashy whitish along the inner edge. Total length 4·4 inches, culmen 0·5, wing 2·2, tail 1·5, tarsus 0·65.

Young birds in fresh plumage have the grey of the upper parts of the body inclining to olive-buff; underneath much more isabelline than in the female, without any trace of black on the throat; lesser and greater wing-coverts broadly edged with isabelline, as well as the innermost secondaries; alar speculum less distinct; margins of the primaries and secondaries very narrow, clearer than in the adult bird and surrounding the tips of the feathers. (*Taczanowski.*)

Hab. Peru.

a, b. ♂ ♀ ad. sk.	Lima, Peru (*W. Nation*).	Sclater Collection.

2. Neorhynchus devronis.

Callirhynchus devronis, *J. Verr. Rev. et Mag. de Zool.* 1852, p. 315.
Callirhynchus drovoni, *Bp. C. R.* xlii. p. 822 (1856).
Gyrhinorhynchus drovoni, *Gray, Hand-l. B.* ii. p. 107, no. 7624 (1870).
Sporophila devronii, *Giebel, Thes. Orn.* iii. p. 503 (1877).
Neorhynchus nasesus, *Berl. & Tacz. P. Z. S.* 1883, p. 550 (*nec Bp.*).

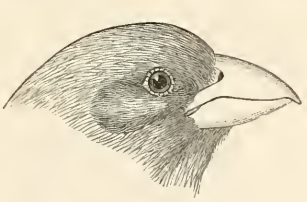
Adult female. Similar to the female of *N. nasesus*, but darker brown, and with the bill not much more than half the size. Total length 3·7 inches, culmen 0·45, wing 2·15, tail 1·5, tarsus 0·55.

Hab. Ecuador.

a, b. [♀] ad. sk.	Guayaquil.	Capt. Kellett and Lieut. Wood [P.].

PIEZORHINA.

	Type.
Piezorhina, *Lafr. Mag. de Zool.* 1843, text to pl. 20	P. cinerea.



Head of *Piezorhina cinerea*, to show exposed nostril.

I am extremely doubtful as to the present genus being a Finch at all, and might suggest that it ought to be placed with the *Tanagridæ*.

Range. Peru.

1. Piezorhina cinerea.

Piezorhina cinerea, *Lafr. Mag. de Zool.* 1843, pl. 20; *Scl. & Salv. P. Z. S.* 1878, p. 137; *Tacz. Orn. Pérou*, iii. p. 23 (1886).
Guiraca cendre, *Prév. et Des Murs, Voy. Venus*, v. p. 209 (1855).

Camarhynchus cinereus, *Gray, Gen. B.* ii. p. 359 (1844); *Bp. Consp.* i. p. 542 (1850); *Salvin, Trans. Z. S.* ix. p. 491 (1876); *Tacz. P. Z. S.* 1877, p. 321.
Gyrinorhynchus cinereus, *Gray, Hand-l. B.* ii. p. 107, no. 7627 (1870).

Adult male. General colour above ashy grey; lesser and median coverts like the back; greater coverts dusky, externally ashy grey, a little lighter than the back; bastard-wing, primary-coverts, and quills blackish brown, externally edged with ashy grey, the primaries margined with paler ashy, the inner secondaries lighter ashy on the outer webs, resembling the greater coverts; rump and upper tail-coverts a little paler than the back; tail-feathers dusky brown, edged with ashy, the outer feathers fringed with white round the end of the inner web; crown of head like the back; lores and base of forehead blackish; eyelid whitish; ear-coverts ashy grey, with whitish shaft-lines; cheeks ashy grey, blackish at the base and below the eye; throat white; fore neck, breast, and sides of body pale ashy grey; abdomen and under tail-coverts white; thighs also white; under wing-coverts and axillaries pale ashy grey, with hoary margins; quills below dusky, ashy along the inner edge: "bill citron-yellow; legs dirty yellow, with claws of the same colour; iris clear brown" (*Jelski*). Total length 6·4 inches, culmen 0·65, wing 3·45, tail 2·6, tarsus 0·95.

Adult female. Similar to the male, and only distinguished by the clear grey colour of the upper parts of the body and on all the margins of the quills and tail-feathers; the under surface is whitish, slightly inclined to isabelline washed with grey on the breast and flanks; lores blackish, slate-colour only on the anterior portion. Bill dirty yellow, as well as the feet. (*Taczanowski.*)

Hab. Peru.

a. Ad. sk.	Payta, Peru, Jan. 1880 (*Capt. A. H. Markham*).	Salvin-Godman Coll.
b. Ad. sk.	Tumbez, Peru (*Jelski*).	Sclater Coll.

17. SPERMOPHILA.

	Type.
Spermophila, *Swains. Zool. Journ.* iii. p. 348 (1827).	S. hypoleuca.
Sporophila, *Cab. in Wiegm. Arch. f. Naturg.* 1844, p. 291	S. luctuosa.
Catamenia, *Bp. Consp.* i. p. 693 (1850)	S. analis.
? Gyrinorhynchus, *Reichenb. Syst. Av.* Taf. lxxix. fig. 7 (1850)	Typo haud indicato.

Head of *Spermophila lineata.*

Range. From Texas, throughout Central America and all over South America, except the extreme southern portions of Chili and Patagonia.

Key to the Species.

a. With no black on the crown; forehead only black; ear-coverts black ..... *albigularis*, p. 93.
b. With no black whatever on the crown.
a'. No chestnut on the abdomen.
a''. No chestnut on the throat.
a'''. With a white alar speculum at the base of the primaries.
a^4. No white bands on the tips of the wing-coverts; general colour ashy.
a^5. Throat white, as well as the cheeks; no grey on the throat .. *hypoleuca*, p. 94.
b^5. Throat dark slaty grey; no white on the cheeks or chin; eyelid dusky ..... *grisea*, p. 96.
c^5. Chin and entire throat light ashy grey; a white spot at the base of the cheeks; eyelid white ..... *plumbea*, p. 97.
d^5. Throat light ashy grey; chin and base of cheeks white; eyelid white..... *whiteleyana*, p. 98.
e^5. Similar to the foregoing, but with the entire throat white as well as the fore part of the cheeks..... *colombiana*, p. 99.
b^4. A white tip to the wing-coverts, producing a double wing-bar; general colour brown or olive-brown.
f^5. Head greyer than back, with a white supraloral spot in adult bird; a narrow eyebrow and cheeks white; sides of face dark ashy ..... *superciliaris*, p. 99.
g^5. Smaller: head like the back; ear-coverts like the crown; no white on the eyebrow or cheeks ..... *simplex*, p. 100.
b'''. No alar speculum; general colour brown, especially on the wings and tail.
c^4. Larger: wing 2·1–2·25 inches; wing-coverts edged with olive-brown .. *obscura*, p. 101.
d^4. Smaller: wing 2 inches; wing-coverts edged with reddish brown.. *pauper*, p. 102.
b''. Chin and upper throat chestnut ..... *telasco*, p. 102.
b'. Abdomen grey or whitish; under tail-coverts chestnut.
c''. No white spot on the tail.
c'''. Larger: back streaked; colour light grey ..... *inornata*, p. 104.
d'''. Smaller: back uniform; colour blackish grey..... *homochroa*, p. 105.

d''. A large white mark on the outer tail-feathers.
e'''. A white speculum formed by the white bases of both webs of the primaries .. *analis*, p. 106.
f'''. Primaries merely edged with white at the base of the outer web only ..... *analoides*, p. 107.
c'. Abdomen chestnut or cinnamon-rufous.
e''. Flanks slaty grey, contrasting with the chestnut throat and breast ..... *castaneiventris*, p. 108.
f'' Flanks deep cinnamon-rufous, like the breast.
g'''. Brown above; ear-coverts brown like the head ..... *minuta*, p. 109.
h'''. Ashy grey above; ear-coverts rufous like the breast ..... *hypoxantha*, p. 111.
i'''. Ashy grey above; sides of face and throat white ..... *palustris*, p. 112.
c. Crown black.
d'. Underneath chestnut; no black collar on the fore neck; size small.
g''. Back chestnut, like the underparts and rump ..... *nigroaurantia*, p. 113.
h''. Back black; rump chestnut, like the underparts ..... *nigrorufa*, p. 114.
e'. Underneath whitish, like the sides of the face; back brown; cap black; bill black.. *pileata*, p. 115.
f'. Underneath with some black on the throat or fore neck.
i''. With the rump rufous or ochraceous buff; under surface of body the same, or buffy white; a black collar across the fore neck.
k'''. With a white loral spot.
*e*⁴. Lower back ashy grey, like the upper back; mantle blackish; rump with a whitish band; under surface of body whitish ..... *polionota*, p. 118.
*f*⁴. Lower back ashy grey, with a creamy buff band across the rump; under surface of body creamy buff ..... *cucullata*, p. 116.
*g*⁴. Lower back chestnut as well as the rump, forming a broad band ..... *melanocephala*, p. 118.
l'''. With no white loral spot.
*h*⁴. No white collar round the hind neck. *torqueola*, p. 119.
*i*⁴. A white collar round the hind neck . *albitorquis*, p. 120.
k''. With no rufous on the rump or under surface of body.
m'''. Throat white.
*k*⁴. Wing-coverts entirely black; a white patch on the sides of the neck separated from the throat by a black collar joining the ear-coverts; below the eye a white spot ..... *ophthalmica*, p. 120.
*l*⁴. Wing-coverts tipped with white; the white patch on the sides of the neck joined to the white throat.

k^5. Lower eyelid black; lower back and rump grey, contrasting with the black mantle ..... *lineata*, p. 121.
i^5. Lower eyelid white; entire back black.
a^6. No white band across the rump. *parva*, p. 124.
b^6. A white band across the rump.. *moreleti*, p. 123.
n'''. Throat black, or with the chin white with the centre of the throat black.
m^4. Back dull ashy, not glossy black.
k^5. Cheeks white, with a white band across the throat, followed by a black collar across the fore neck; no yellow on the lower parts .... *cærulescens*, p. 126.
l^5. Cheeks black, as also the entire throat and fore neck; the breast and abdomen yellowish ..... *gutturalis*, p. 128.
n^4. Back black.
m^5. Abdomen white.
c^6. The black confined to the chin and upper throat; cheeks white; no black collar across the fore neck; lower throat white.
a^7. Lower throat and fore neck mottled with black ..... *ocellata*, p. 130.
b^7. Lower throat entirely white.
a^8. Centre of crown with a white streak ..... *lineola*, p. 131.
b^8. Crown with a few tiny white spots ..... *trinitatis*, p. 132.
c^8. Crown entirely black, with no white spots at all .... *amazonica*, p. 132.
d^6. The black extending over the throat and fore neck.
c^7. A white patch on the sides of the neck.
d^8. The white patch on the sides of the neck separated by the black of the throat. *aurita* ad., p. 134.
e^8. The white patch on the sides of the neck united by a white band across the lower throat ..... *aurita* var. vel imm., [p. 134.
d^7. No white on the sides of the neck, which are entirely black, like the throat and fore neck ..... *luctuosa*, p. 135.
n^5. Entire under surface black ..... *corvina*, p. 137.
g'. Entire under surface of body pure white .. *bicolor*, p. 138.

1. Spermophila albigularis.

Loxia albigularis, *Spix, Av. Bras.* ii. p. 46, pl. 60. figs. 1, 2 (1824).
Spermophila albigularis, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 477 (1850); *Pelz. Orn. Bras.* p. 437 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873).

Sporophila albigularis, *Cab. Mus. Hein.* Th. i. p. 149 (1850); *Burm. Th. Bras.* ii. p. 243 (1855).
Gyrinorhynchus albigularis, *Gray, Hand-l. B.* ii. p. 106, no. 7588 (1870).

Adult male. General colour above dull slaty grey, the mantle slightly mottled with dusky subterminal markings on the feathers; lesser wing-coverts like the back; median coverts and greater coverts, bastard-wing, primary-coverts, and quills blackish, with ashy margins, a little more distinct on the inner secondaries; the middle primaries white at the base of the outer web, forming a small speculum; upper tail-coverts blackish, broadly edged with ashy; tail-feathers black, with narrow ashy margins; crown of head slaty grey like the back, the hinder crown and occiput mottled with black bases to the feathers; fore part of the crown entirely black; lores black, with a narrow white line above; feathers round eye and ear-coverts black, the latter washed posteriorly with slaty grey; cheeks, throat, and sides of neck white, followed by a broad band of black across the fore neck; sides of the latter, as well as the sides of the chest and breast, sides of body and flanks light slaty grey; the centre of the breast and abdomen, as well as the under tail-coverts, white; thighs white, black posteriorly; under wing-coverts and axillaries white, the lower coverts forming a dusky patch near the edge of the wing; quills below blackish, white at the base of the inner web, which is edged with ashy. Total length 4·3 inches, culmen 0·4, wing 2·2, tail 1·8, tarsus 0·6.

In *seasonal plumage* the grey colour is very much lighter on the upper parts, also pervading the head, so as to leave only the forehead black; the wing-coverts and quills, especially the inner secondaries, are broadly margined with ashy; the tiny white mark on the lores is more distinct; the black collar has the feathers edged with ashy.

Hab. Brazil.

a. ♂ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Bahia (*Wucherer*).	Sclater Coll.
c. ♂ ad. sk.	Bahia (*coll. Berlepsch*).	Sclater Coll.

2. Spermophila hypoleuca.

Pico triqueño, *Azara, Apunt.* i. p. 447 (1802).
Fringilla hypoleuca, *Licht. Verz. Doubl.* p. 26 (1823).
Pyrrhula cinereola, *Temm. Pl. Col.* iii. pl. xi. fig. 1 (1824).
Fringilla rufirostris, *Neuwied, Beitr. Naturg. Bras.* iii. p. 581 (1830).
Spermophila hypoleuca, *Hartl. Ind. Azara*, p. 8 (1847); *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 497 (1850); *Scl. Cat. Amer. B.* p. 103 (1862); *Pelz. Orn. Bras.* pp. 223, 437 (1871); *Scl. Ibis*, 1871, p. 17; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *W. A. Forbes, Ibis*, 1881, p. 336.
Sporophila hypoleuca, *Cab. Mus. Hein.* Th. i. p. 148 (1850); *Licht.*

Nomencl. Av. Berol. p. 45 (1854); *Burm. Th. Bras.* iii. p. 241 (1856).

Gyrinorhynchus hypoleucus, *Gray, Hand-l. B.* ii. p. 105, no. 7579 (1870).

Adult male. General colour above slaty grey; lesser wing-coverts like the back; median and greater coverts dusky blackish, edged with slaty grey; bastard-wing, primary-coverts, and quills blackish, fringed with ashy grey, hoary whitish on the primaries, the inner ones of which have white bases to the outer webs, forming a large alar speculum; upper tail-coverts a little more ashy than the back; tail-feathers blackish, edged with ashy grey, and tipped with ashy; crown of head like the back, slightly mottled with obscure dusky centres to the feathers; sides of face, lores, feathers round the eye, and ear-coverts slaty grey; cheeks, throat, and under surface of body white; sides of neck slaty grey; lower throat and fore neck washed with ashy grey; sides of body and flanks also ashy grey; thighs white, grey posteriorly; under tail-coverts white; under wing-coverts and axillaries white, with a dusky spot near the edge of the wing; quills below dusky, edged with ashy along the inner web, which is white at the base: "bill reddish grey-brown" (*Neuwied*), "fleshy red" (*W. A. Forbes*); "legs greyish brown; iris greyish brown" (*Neuwied*), "iris brown" (*W. A. Forbes*). Total length 4·65 inches, culmen 0·4, wing 2·3, tail 2, tarsus 0·7.

I believe that two species are confounded under the heading of *S. hypoleuca*, for some male birds are entirely white below without any grey on the fore neck. The only argument against the existence of two species is that both forms occur in the same locality, Mr. W. A. Forbes having met with them near Pernambuco. I would mention, however, that two forms of females, one reddish brown and the other more olive-brown, also occurred in his collection. In one of his white-breasted males the secondaries are also white at the base of the outer web, forming a second alar speculum, which is, however, concealed by the greater coverts.

Hab. Brazil.

a. ♂ ad. sk.	Brazil.	Sclater Coll.
b. ♂ ad. sk.	Rio.	Sclater Coll.
c, d. ♂ ad.; *e, f, g.* ♀ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Bahia (*Wucherer*).	Sclater Coll.
i. ♀ ad. sk.	Bahia (*coll. Berlepsch*).	Sclater Coll.
k, l. ♂ ad. sk.; *m.* ♀ ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
n, o. ♂ ♀ ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Coll.
p. ♂ ad. sk.	Para.	R. Graham, Esq. [C.].

3. Spermophila grisea.

Gros-bec de Virginie, *Daubent. Pl. Enl.* iv. pl. 393. fig. 1 *.
Le Grisalbin, *Buff. Hist. Nat. Ois.* iii. p. 467 (1775).
Grey Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 134 (1783).
Loxia grisea, *Gm. Syst. Nat.* i. p. 857 (1788).
Spermophila grisea, *Gray, Gen. B.* ii. p. 386 (1844); *Scl. Ibis*, 1871, p. 18; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *id. P. Z. S.* 1879, p. 507; *Salv. & Godman, Biol. Centr.-Amer., Aves*, i. p. 356 (1884); *Salvin, Ibis*, 1885, p. 215.
Sporophila cinereola, *Bp. Consp.* i. p. 499 (1850).
Sporophila intermedia, *Cab. Mus. Hein.* Th. i. p. 149 (1850).
Spermophila cinerea, *Lawr. Ann. Lyc. N. Y.* vii. p. 474 (1861).
Spermophila plumbea, *Sclater, Cat. Amer. B.* p. 103 (1862, *nec Neuwied*).
Spermophila intermedia, *Sclater, Cat. Amer. B.* p. 103 (1862).
Spermophila schistacea, *Lawr. Ann. Lyc. N. Y.* viii. p. 10 (1866).
Gyrinorhynchus griseus, *Gray, Hand-l. B.* ii. p. 106, no. 7609 (1870).

Adult male. General colour above dark slaty grey, a little tinged with brown on the upper tail-coverts; lesser wing-coverts like the back; median and greater coverts blackish, externally edged with slaty grey, the latter slightly washed with brown; bastard-wing, primary-coverts, and quills black, edged with ashy grey, the secondaries more broadly, the inner primaries white at the base of the outer web, forming an alar speculum, almost concealed by the primary-coverts; tail-feathers blackish, edged with ashy grey, the centre feathers washed with ashy; crown of head dark slaty grey; lores blackish; sides of face and ear-coverts, cheeks, entire throat, and sides of neck dark slaty grey, blackish on the base of the cheeks; fore neck, breast, and abdomen white; sides of body and flanks dark slaty grey; thighs dark slaty grey; under tail-coverts white; under wing-coverts and axillaries white, with a black patch near the edge of the wing; quills below dusky, edged with ashy along the inner web, which is white towards the base. Total length 4·4 inches, culmen 0·4, wing 2·5, tail 1·55, tarsus 0·5.

In some of the males the grey colour of the throat extends over the breast.

Panama skins have the lower edge of the eyelid white, and an ill-defined white patch on the sides of the neck; the alar speculum is very large, and the inner greater coverts are tipped with white. The female is dark ashy washed with olive, grey below, with an olive-yellow tinge; centre of breast and abdomen white, tinged with yellow.

Were these characters constant, it would be necessary to keep the Panama birds distinct, but they certainly are not, one specimen being identical with Colombian and Guianan specimens, and another

* This is the figure on which Gmelin founded his *Loxia grisea*. This specific name has been adopted by so many writers, and the species is so well understood under its modern name of *Spermophila grisea*, that I do not intend to alter it; but the figure, if ever intended for the species, is as inaccurate as is the locality.

intermediate between them and the adult male from Panama described above.

Adult female. General colour above light olive-brown; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with olive-brown, the primaries with ashy; upper tail-coverts like the back; tail-feathers brown, edged with olive-brown; crown of head a little more dusky than the back; lores, feathers round eye and above the latter yellowish olive; ear-coverts, cheeks, and under surfaces of body also pale yellowish olive, the centre of the breast and abdomen olive-white; sides of body and flanks pale olive-brown; thighs and under tail-coverts like the breast; under wing-coverts and axillaries white, slightly tinged with yellow; quills below dusky, edged with ashy along the inner web. Total length 4·5 inches, culmen 0·4, wing 2·1, tail 1·65, tarsus 0·6.

Hab. From Guiana to Venezuela; Trinidad, and Colombia, extending to Panama.

a. ♂ ad. sk.	[Brazil.]	J. Gould, Esq.
b. ♀ ad. sk.	R. Amazon.	Sclater Coll.
c. ♂ ad. sk.	Cayenne.	Sclater Coll.
d, e. ♂ ad. sk.	Roraima, 3500 feet, Jan. 24, 1884 (*H. Whitely*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Venezuela.	Sclater Coll.
g. ♂ ad. st.	Trinidad.	Purchased.
h, i. ♂ ad. sk.	Trinidad.	Zoological Society.
k. ♀ ad. sk.	Santa Marta.	W. Wilson Saunders, Esq. [P.].
l. ♂ ad. sk.	Medellin, Sept. 1878 (*T. K. Salmon*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Envigado, Antioquia (*T. K. Salmon*).	Sclater Coll.
n, o. ♂ ♀ ad. sk.	Bogotá.	Sclater Coll.
p, q. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.
r, s. ♂; *t.* ♀ ad. sk.	Bugaba, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Chiriqui (*E. Arcé*).	Sclater Coll.
v. ♂ ad. st.	South America.	Purchased.

4. Spermophila plumbea.

Fringilla plumbea, *Neuwied, Beitr. Naturg. Bras.* iii. p. 579 (1830).
Pyrrhula cinerea, *d'Orb. & Lafr. Syn. Av., Mag. de Zool.* 1837, p. 87.
Spermophila cinerea, *Gray, Gen. B.* ii. p. 386 (1844).
Sporophila cinerea, *Bp. Consp.* i. p. 499 (1850).
Sporophila plumbea, *Cab. Mus. Hein.* Th. i. p. 149 (1850); *Burm. Th. Bras.* iii. p. 242 (1856).
Pyrrhula vetula, *Natterer, MSS.*
Spermophila plumbea, *Pelz. Orn. Bras.* pp. 223, 437 (1871); *Scl. Ibis*, 1871, p. 18; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *iid. P. Z. S.* 1879, p. 605; *W. O. Forbes, Ibis*, 1881, p. 336.
Gyrinorhynchus plumbeus, *Gray, Hand-l. B.* ii. p. 105, no. 7578 (1870).

Adult male. General colour above ashy grey, a trifle lighter on the lower rump; lesser wing-coverts like the back; median and greater coverts and bastard-wing blackish, edged with ashy, paler on the latter; primary-coverts and quills blackish, edged with ashy, broader on the secondaries, the primaries margined with hoary whitish, the inner ones white at the base of the outer web, forming an alar speculum; upper tail-coverts dusky blackish, edged with ashy; tail-feathers blackish, edged with ashy brown and fringed with pale ashy at the end of the feathers; crown of head like the back; lores black, extending to the base of the nostrils; ear-coverts and cheeks dark ashy, the former with whitish shaft-lines; at the base of the cheeks a small white streak; lower eyelid white; throat and breast uniform ashy grey, the centre of the breast and abdomen white; sides of body and flanks ashy grey; thighs white, ashy posteriorly; under tail-coverts white like the abdomen; under wing-coverts and axillaries white, with a blackish patch near the edge of the wing; quills below dusky, ashy along the edge of the inner web, which is white towards the base; bill blackish; legs dark brownish grey; "iris bright greyish brown" (*Neuwied*). Total length 4·5 inches, culmen 0·4, wing 2·45, tail 1·75, tarsus 0·6.

The specimen described was procured by Natterer at Curytiba in November, and has the bill yellow. A male obtained by the same traveller at Ytararé in February is similar, but has the bill black; wing 2·5. The Guiana specimen is paler coloured, has a white band across the chin, and the female is a much redder bird. The Colombian further differs in some smaller particulars, so that I have separated both these forms as subspecies.

Hab. Brazil, extending into Bolivia.

a. ♂ ad. sk.	Curytiba, Nov. 23, 1820 (*J. Natterer*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Ytararé, Feb. 24, 1821 (*J. Natterer*).	Salvin-Godman Coll.
c, d. ♂ ♀ ad. sk.	Ytararé, Feb. 1821 (*J. Natterer*).	Sclater Coll.

Subsp. *a.* Spermophila whiteleyana.

Spermophila plumbea (*nec Neuwied*), *Salvin, Ibis*, 1885, p. 215.

Adult male. General colour above pale ashy grey, rather lighter on the lower rump; lesser wing-coverts like the back; median and greater coverts dusky blackish, edged with hoary ashy on the latter; bastard-wing, primary-coverts, and quills dusky blackish, edged with ashy, the primaries margined with hoary grey, the inner ones white at the base of the outer web, forming an alar speculum; tail-coverts ashy grey; tail-feathers blackish, edged with ashy, and pale brown at the tips of the feathers; crown of head like the back; lores dusky ashy; lower eyelid white; ear-coverts and cheeks dull ashy; fore part of cheeks and upper throat white; centre of throat and under surface of body pale ashy grey; centre of breast and abdomen white: thighs and under tail-coverts white; under wing-coverts

and axillaries white, with an ashy patch near the edge of the wing; quills below dusky, edged with ashy along the inner web, which is white towards the base. Total length 4·4 inches, culmen 0·35, wing 2·35, tail 1·75, tarsus 0·55.

Other males, apparently younger birds, procured at the same season of the year, are much browner above and on the margins of the wing-coverts and quills; the underparts are also suffused with brown, which colour likewise deadens the white on the throat and abdomen.

Hab. Guiana.

a. ♂ ad.; *b, c*. ♀ ad.; *d*. ♂ juv. sk.	Roraima, Nov. 1883 (*H. Whitely*).	Salvin-Godman Coll.
e, f. ♂ ♀ ad. sk.	Roraima, Nov. 1883 (*H. W.*).	Sclater Coll.
g, h. ♂ ad. sk.	Roraima, Dec. 1883 (*H. W.*).	Salvin-Godman Coll.

Subsp. β. Spermophila colombiana.

Spermophila plumbea (*nec Neuwied*), *Salvin & Godman, Ibis*, 1880, p. 122.

Adult male. Similar to the male of *S. plumbea*, but a little paler grey, and distinguished by the feathers below the eye, the fore part of the cheeks, and the entire throat being white. Total length 4·5 inches, culmen 0·35, wing 2·25, tail 1·65, tarsus 0·55.

Hab. U.S. of Colombia.

a, b. ♂ ♀ ad. sk.	Bogotá (*J. Crowther*).	Salvin-Godman Coll.

5. Spermophila superciliaris *.

Spermophila superciliaris, *Pelz. Orn. Bras.* pp. 223, 330 (1869); *Gray, Hand-l. B.* ii. p. 107, no. 7615 (1870); *Scl. Ibis*, 1871, p. 22; *Berlepsch & Ihering, Zeitschr. ges. Orn.* ii. p. 122, pl. vii. (1885).
Sporophila euleri, *Cab. J. f. O.* 1874, p. 84.
Sporophila superciliaris, *Giebel, Thes. Orn.* iii. p. 523 (1877).

Adult male. General colour above olive-green; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with olive and tipped with ochreous white, forming a double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with olive like the back; upper tail-coverts like the back; tail-feathers brown, edged with olive; crown of head a little more

* Without seeing the type specimen it is difficult to say for certain, but at all events *S. frontalis* (J. Verr.) must be closely allied to *S. superciliaris*, if not identical with it. The synonymy is as follows:—

SPERMOPHILA FRONTALIS.

Callyrhynchus frontalis, *J. Verr. N. Arch. Mus.* v. *Bull.* p. 15, pl. i. fig. 1 (1869).
Gyrhinorhynchus frontalis, *Gray, Hand-l. B.* ii. p. 107, no. 7626 (1870).

dusky olive than the back; lores and a narrow eyebrow yellowish white, as also the eyelid; ear-coverts olive-brown, streaked with white; cheeks, throat, and under surface of body white, washed with yellow; sides of neck olive-green; fore neck and chest more ashy, washed with yellow; lower breast and abdomen white, sides of body and flanks ashy brown washed with olive; thighs brown washed with olive; under tail-coverts isabelline, with brown bases and washed with olive; under wing-coverts and axillaries white, edged with olive-yellow; quills below dusky, ashy whitish along the inner edge. Total length 5·5 inches, culmen 0·45, wing 2·55, tail 1·95, tarsus 0·6.

Adult female. Darker olive-green than the male; the median and greater wing-coverts tipped with ochreous buff, forming a double wing-bar; the margins of the quills more reddish brown than in the male; eyelid and lores olive-yellow; ear-coverts and sides of face dull olive-green; throat olive-yellow; fore neck, breast, and sides of the body olive-brown washed with yellow; centre of abdomen white, washed with olive-yellow; under tail-coverts pale brown, washed with olive-yellow at the ends, which are dull whitish. Total length 4·7 inches, culmen 0·45, wing 2·5, tail 1·9, tarsus 0·65.

A young male which died in the Zoological Gardens has the buff tips to the wing-coverts as in the old female, and has the base of the forehead white. The adult male described above is from Pelotas, and shows no sign of this white forehead, which is apparently only assumed when the bird is very old. It is present in a Brazilian specimen in the Salvin-Godman Collection, this specimen being white below with scarcely any tinge of yellow, the sides of the body ashy brown.

Hab. Brazil.

a. Ad. sk.	Brazil.	J. Gould, Esq.
b, *c*. ♂ ♀ ad. sk.	Brazil.	Sclater Coll.
d, *e*. ♀ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
f. ♂ Ad. sk.	San Paulo (*Joyner*).	Salvin-Godman Coll.
g. Ad. sk.	Brazil.	Salvin-Godman Coll.

6. **Spermophila simplex.**

Spermophila simplex, *Tacz. P. Z. S.* 1874, pp. 132, 519; *Nation, t. c.* p. 329; *Tacz. P. Z. S.* 1880, p. 199; *id. Orn. Pérou,* iii. p. 16 (1886).

Sporophila simplex, *Giebel, Thes. Orn.* iii. p. 523 (1877).

Adult male. General colour above light olive-brown, strongly washed with ashy; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with olive-brown, blackish at base, and rather broadly tipped with white, forming a double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with olive-brown, the inner secondaries whitish at the ends, the inner primaries white at the base of the outer web, forming a speculum; upper tail-coverts like the back; tail-feathers brown,

edged with olive-brown; crown of head like the back; lores and feathers round eye ashy whitish; ear-coverts dull ashy brown; cheeks and under surface of body whitish, washed with yellow; the fore neck and sides of body light ashy brown; thighs pale ashy brown, internally white; under tail-coverts white, with an olive-yellow tinge; under wing-coverts white, tinged with yellow; axillaries olive-yellow; quills below dusky, ashy along the inner web, which is whitish towards the base: "bill brownish, with the lower mandible greyish horn-colour, fleshy underneath; feet dark lead-colour; iris dark brown" (*Jelski*). Total length 4·3 inches, culmen 0·35, wing 2·35, tail 1·7, tarsus 0·6.

The sexes, as determined by Prof. Nation, are alike. The female measures:—Total length 4·5 inches, culmen 0·4, wing 2·25, tail 1·8, tarsus 0·6.

Young specimens, according to Dr. Taczanowski, differ from the adults in having a faint tinge of brownish on the upper parts, this tint being also apparent on the whitish under surface; the white bands on the wings are less pronounced and have a reddish tinge, as well as the margins of the scapular plumes.

Hab. Peru.

a, b. ♂ ♀ ad.; *c.* Juv. sk.	Lima, Peru (*Prof. Nation*).	Sclater Coll.
d. ♂ ad. sk.	Callacate, Peru (*J. Stolzmann*).	Sclater Coll.

7. Spermophila obscura.

Spermophila obscura, *Tacz. P. Z. S.* 1874, p. 519; *id. Orn. Pérou*, iii. p. 17 (1886).
Spermophila ornata, ♀ (*nec Licht.*), *Salvin, Ibis*, 1880, p. 353.

Adult male. General colour above uniform brown, slightly washed with olive; lesser and median wing-coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with lighter brown, somewhat reddish brown on the quills; tail-feathers brown, washed externally with olive-brown; head a little more ashy brown than the back; lores and eyelid pale ashy whitish; sides of face dull ashy brown; cheeks, throat, and under surface of body ashy, a little washed with olive-brown on the flanks; centre of breast and abdomen dull whitish; thighs ashy fulvous; under tail-coverts dusky, edged with fulvous; axillaries like the breast; under wing-coverts dusky, broadly edged with pale fulvous; quills dusky below, ashy fulvous along the inner web: "upper mandible blackish brown, the lower one paler and approaching fleshy yellow; feet fleshy; iris dusky brown" (*Jelski*). Total length 3·8 inches, culmen 0·4, wing 2·1, tail 1·55, tarsus 0·65.

Adult female. Similar to the male, but a little browner grey: "bill brown, the upper mandible darker; legs and feet flesh-colour; iris wood-brown" (*H. Durnford*). Total length 4 inches, culmen 0·4, wing 2·25, tail 1·75, tarsus 0·65.

Both specimens have slight traces of a wing-bar formed by lighter brown tips to the median wing-coverts. The Salta specimen is a

little larger than that from Peru; but I do not think there can be any doubt of their both belonging to the same species.

Hab. From Peru to the Western Argentine Republic.

a. Ad. sk.	Callacate, Peru (*Stolzmann*).	Sclater Coll.
b. ♀ ad. sk.	Salta, Argentine Republic, June 28, 1878.	H. Durnford, Esq. [C.].

8. Spermophila pauper.

Spermophila obscura (*nec Tacz.* 1874), *Tacz. P. Z. S.* 1880, p. 199.
Spermophila pauper, *Berlepsch & Tacz. P. Z. S.* 1883, p. 550; *Tacz. Orn. Pérou*, iii. p. 18 (1886).

Adult male. General colour above brown, with a slight olive tinge; lesser and median coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with the same colour as the back, the greater coverts and inner secondaries rather more reddish on the margins; upper tail-coverts like the back; tail-feathers brown, edged with paler brown; crown of head slightly more ashy than the back; the lores and feathers round eye ashy whitish; ear-coverts dull ashy brown; cheeks and throat pale ashy; sides of neck like the head; fore neck and breast dark ashy brown, washed with olive; abdomen whitish; sides of body and flanks olive-brown; thighs olive-brown; under tail-coverts pale fulvous; under wing-coverts and axillaries whitish with a fulvous tinge, those near the edge of the wing dusky brown; quills below dusky, ashy along the inner edge: "iris dark brown" (*J. Stolzmann*). Total length 3·5 inches, culmen 0·35, wing 2, tail 1·5, tarsus 0·65.

Hab. Ecuador to Peru.

a, *b.* ♂ ad. sk.	Chimbo, Ecuador, Nov. 1882 (*J. Stolzmann*).	Sclater Coll.

9. Spermophila telasco.

Pyrrhula telasco, *Less. Voy. Coquille*, i. p. 663, pl. 15. fig. 3 (1826).
Pyrrhula alaudina, *d'Orb. & Lafr. Syn. Av., Mag. de Zool.* 1837, p. 88.
Spermophila telasco, *Gray, Gen. B.* ii. p. 386 (1844); *Scl. Ibis*, 1871, p. 7; *id. P. Z. S.* 1871, p. 497; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Nation, P. Z. S.* 1874, p. 329; *Tacz. t. c.* p. 519, 1877, p. 320; *Berlepsch & Tacz. P. Z. S.* 1883, p. 550; *Salv. t. c.* p. 421; *Tacz. Orn. Pérou*, iii. p. 14 (1886).
Sporophila alaudina, *Bp. Consp.* i. p. 496 (1850); *Tschudi & Cab. Faun. Peruan.* p. 222 (1855).
Sporophila telasco, *Tschudi & Cab. Arch. f. Naturg.* 1844, p. 291, et *Faun. Peruan.* p. 221 (1855).
Gyrinorhynchus telasco, *Gray, Hand-l. B.* ii. p. 105, no. 7570 (1870).

Adult male. General colour above ashy grey, washed with brown, and mottled with blackish centres to the feathers of the mantle and

back; rump ashy grey, slightly mottled with black spots, with a white band across the lower rump; lesser wing-coverts ashy brown, with blackish bases; median and greater coverts and bastard-wing blackish, edged with lighter brown, whitish towards the ends of the latter; primary-coverts uniform blackish; quills blackish, edged with ashy, hoary whitish on the margins of the primaries and inner secondaries; both the inner primaries and the inner secondaries white at the base of the outer web, forming a double speculum; upper tail-coverts ashy grey; tail-feathers blackish, edged and tipped with ashy brown, with more or less white at the base, extending some distance up the margins of the centre feathers; crown of head dark ashy grey, minutely centred with blackish streaks; the nape sandy brown, with minute blackish centres, as also the hind neck, which is ashy grey like the back; lores dusky; ear-coverts dark ashy grey, as also the cheeks, which are separated by a narrow white line from the throat, which is maroon-chestnut; sides of neck light brown; remainder of under surface of body white, slightly washed with sandy brown on the breast, sides of body, and flanks, the latter with dusky blackish streaks; thighs and under tail-coverts white; under wing-coverts and axillaries also white, with a blackish patch near the edge of the wing, which is likewise blackish; quills below dusky blackish, white along the inner web: "bill blackish; feet greyish brown; iris dark brown" (*Stolzmann*). Total length 4 inches, culmen 0·35, wing 2·15, tail 1·55, tarsus 0·6.

In *winter plumage* the adult male is altogether browner than in the breeding-plumage, with darker brown centres to the feathers; head brown like the back: the light edges to the wing-coverts and quills broader and more hoary; the chestnut spot on the throat obscured by sandy margins to the feathers.

The alar specula vary in development, and in some specimens the white bases of the secondaries are hidden by the greater coverts.

Adult female. Different from the male and altogether browner; the white rump-band and the under surface of the body washed with sandy buff; no chestnut spot on the throat; no white base to the tail-feathers. Total length 4 inches, culmen 0·35, wing 2·15, tail 1·6, tarsus 0·4.

Hab. Western Peru to Ecuador.

a. [♀ ad.] sk.	Guayaquil.	G. Barclay, Esq. [P.].
b. ♂ imm. sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Tambo Valley, Peru, Oct. 21, 1867 (*H. Whitely*).	Salvin-Godman Coll.
d. ♂; *e, f.* ♀ ad. sk.	Lima, Peru (*W. Nation*).	Sclater Coll.
g. ♂ ad. sk.	Callao, Peru, Dec. 1881 (*Capt. A. H. Markham*).	Salvin-Godman Coll.

10. Spermophila inornata.

Linaria inornata, *Lafr. Rev. Zool.* 1847, p. 75.
Fringilla inornata, *Gray, Gen. B.* ii. p. 372 (1849).
Sporophila rufirostris, *Landb. J. f. O.* 1865, p. 404.
Gyrinorhynchus rufirostris, *Gray, Hand-l. B.* ii. p. 106, no. 7603 (1870).
Spermophila rufirostris, *Sclater, Ibis,* 1871, p. 21.
Catamenia inornata, *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Tacz. P. Z. S.* 1879, p. 229, 1880, p. 199; *Scl. P. Z. S.* 1881, p. 486; *Berlepsch & Tacz. P. Z. S.* 1885, p. 85.
Catamenia rufirostris, *Tacz. P. Z. S.* 1874, p. 521; *id. Orn. Pérou,* iii. p. 21 (1886).
Catamenia homochroa, *Berlepsch & Tacz. P. Z. S.* 1884, p. 293 (*nec Sclater*).

Adult male. General colour above bluish grey, streaked with blackish on the mantle and back, less distinctly on the crown; the rump and upper tail-coverts uniform bluish grey; lesser wing-coverts uniform bluish grey; median and greater coverts dusky, externally bluish grey, the latter series whitish at the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy grey, hoary on the primaries; tail-feathers dusky brown, edged with ashy; sides of face and under surface of body light ashy grey, whitish on the lower abdomen; under tail-coverts chestnut; under wing-coverts and axillaries light ashy grey; quills dusky below, ashy along the inner web, which is not white towards the base: "bill reddish; feet brownish flesh-colour; iris dark brown" (*J. Stolzmann*). Total length 5·8 inches, culmen 0·4, wing 3·1, tail 2·5, tarsus 0·8.

The adult male from Acancocha is much smaller than Bolivian birds; wing 2·7. This is, however, equalled by the specimen collected by Mr. Forbes in Bolivia and the one from Lima (*Nation*).

Younger males are brown on the head and back, which parts are distinctly streaked with blackish; rump and upper tail-coverts more uniform ashy grey. The grey of the under surface is washed with brown.

The skins here considered to be young males may be adult birds in seasonal plumage, the series in the Museum not being sufficient to determine all the changes of plumage.

Hab. Bolivia and Ecuador.

a. ♂ ad. sk.	Bolivia.	Mr. C. Bridges [C.].
b. [♂ juv.] sk.	Bolivia (*Forbes*).	Sclater Coll.
c. ♂ ad. sk.	Mendoza, Feb. 1871 (*Weiss-haupt*).	Salvin-Godman Coll.
d. [♂ juv.] sk.	Andes of Lima, Peru (*Prof. Nation*).	Sclater Coll.
e. ♂ ad. sk.	Acancocha, Peru, May 1873 (*Jelski*).	Sclater Coll.

11. Spermophila homochroa *.

Catamenia homochroa, *Sclater, P. Z. S.* 1858, p. 552, 1860, p. 88; *id. Cat. Amer. B.* p. 106 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Tacz. P. Z. S.* 1874, p. 521, 1879, p. 229; *Berlepsch & Tacz. P. Z. S.* 1885, p. 85.

Gyrinorhynchus homochrous, *Gray, Hand-l. B.* ii. p. 107, no. 7621 (1870).

Sporophila homochroa, *Giebel, Thes. Orn.* iii. p. 520 (1877).

Catamenia, sp., *Salvin, Ibis*, 1885, p. 216 †.

Adult male (type of species). Uniform dark slaty grey above and below, slightly washed with olive-brown on the lower surface, and particularly on the sides of the body; the forehead, lores, fore part of the cheeks, and ear-coverts somewhat blacker; under tail-coverts chestnut; quills blackish below, edged with ashy along the inner web, which is not white at the base: "bill pale yellow; feet brownish flesh-colour; iris dark brown" (*Jelski*). Total length 4·7 inches, culmen 0·4, wing 2·6, tail 2, tarsus 0·75.

Adult female. Different from the male; general colour above brown, the feathers mesially streaked with blackish brown; rump and upper tail-coverts uniform and more olive-brown; lesser and median coverts rather more ashy than the back; greater coverts dark brown, with fulvescent-brown tips; bastard-wing and primary-coverts dark brown; quills dark brown, edged with lighter brown, more ashy on the primaries; tail-feathers dark brown, edged with ashy brown; crown of head darker brown than the back and less distinctly streaked; lores, sides of face, and ear-coverts uniform brown; eyelid whitish: ear-coverts and sides of neck somewhat washed with ashy; throat and fore neck pale ashy olive-brown; breast and abdomen light olivaceous; sides of body and flanks olive-brown, the latter broadly streaked with dusky brown; thighs olive-brown; under tail-coverts chestnut; under wing-coverts and axillaries ashy olive, washed with fulvous near the edge of the wing; quills below dusky, ashy along the inner edge. Total length 4·8 inches, culmen 0·4, wing 2·3, tail 2·05, tarsus 0·8.

Young male. Resembling the old female, but more ashy grey on the head, neck, and breast.

Hab. Northern Peru and Ecuador, and probably Guiana.

a. ♂ ad. sk.	Matos, Ecuador, June 1858 (*L. Fraser*).	Sclater Coll. (Type of species.)
b. ♀ ad. sk.	Calacali, Ecuador, March 1859 (*L. Fraser*).	Sclater Coll.

* As has also been pointed out by Dr. Taczanowski and Count von Berlepsch, the bill in this species is more pointed and is longer than in the allied species. It is in fact more of a Bunting's bill, and once more raises the question whether *Spermophila* is not rather a Bunting than a Grosbeak.

† The birds procured by Mr. Whitely on Roraima were all immature. Mr. Salvin noticed that they were closely allied to *S. homochroa*, and I am inclined to think them identical.

c. ♂ ad. sk.	Puellaro, Ecuador, April 1859 (*L. Fraser*).	Sclater Coll.
d. ♂ ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Intaj, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
f. [♂ juv.] sk.	Bogotá, Colombia.	Purchased.
g. [♂ juv.] sk.	Bogotá, Colombia.	Sclater Coll.
h. [♀ ad.] sk.	Bogotá, Colombia.	Salvin-Godman Coll.
i. ♂ juv. sk.	Roraima, British Guiana, Aug. 22, 1883 (*H. Whitely*).	Salvin-Godman Coll.
k,l. ♂ ♀ juv. sk.	Roraima, Sept. 7, 1883 (*H. W.*).	Salvin-Godman Coll.

12. Spermophila analis.

Linaria analis, *D'Orb. Voy. Amér. Mérid.* p. 364, pl. 48. fig. 1 (1847).
Fringilla analis, *Gray, Gen. B.* ii. p. 371 (1849).
Catamenia analis, *Bp. Consp.* i. p. 493 (1850); *Scl. Cat. Amer. B.* p. 105 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Scl. P. Z. S.* 1873, p. 780; *Tacz. P. Z. S.* 1874, p. 521; *Scl. & Salv. P. Z. S.* 1874, p. 677; *White, P. Z. S.* 1882, p. 599; *Tacz. Orn. Pérou*, iii. p. 19 (1886).
Gyrinorhynchus analis, *Gray, Hand-l. B.* ii. p. 107, no. 7619 (1870).
Sporophila analis, *Giebel, Thes. Orn.* iii. p. 517 (1877).

Adult male. General colour above uniform slaty grey; lesser wing-coverts like the back; median and greater coverts, bastard-wing, and primary-coverts black, edged with slaty grey; quills black, margined with hoary grey, the primaries white at the base of both webs, forming a large alar speculum; upper tail-coverts slaty grey, with longitudinal black centres; tail-feathers black, edged with ashy, the outer feathers tipped with white at the end of the inner web, all but the centre ones with a large rounded spot of white near the middle of the inner web; crown of head slaty grey like the back; the forehead black, extending a little on to the crown; lores, feathers round eye, fore part of ear-coverts, and cheeks black; hinder cheeks and ear-coverts slaty-grey like the throat and sides of neck; chin black; remainder of under surface slaty grey; centre of breast and abdomen white; sides of body and flanks slaty grey; thighs ashy; under tail-coverts deep chestnut, tipped with white; under wing-coverts and axillaries dark slaty grey; quills below dusky, edged with ashy along the inner web, which is white at the base. Total length 4·8 inches, culmen 0·35, wing 2·5, tail 2, tarsus 0·65.

Adult female. Different from the male. General colour above light brown, streaked with blackish centres to the feathers; lower back, rump, and upper tail-coverts ashy grey, washed with brown and narrowly streaked with black; lesser wing-coverts ashy grey; median and greater coverts blackish brown, edged with pale fulvous brown, whitish on the extreme margins; bastard-wing, primary-coverts, and quills dark brown, fringed with pale brown, more ashy on the primaries, which are white at the base of the outer web, forming a large alar speculum; tail-feathers brown, fringed with paler brown, with a large patch of white about the middle of the inner web; crown of head like the back and similarly streaked;

lores ashy; eyelid whitish; ear-coverts and cheeks light brown, streaked with dusky brown; throat and under surface of body ashy whitish, narrowly streaked with blackish shaft-lines; centre of breast and abdomen uniform whitish; sides of body and flanks washed with ashy and streaked like the breast; thighs white; under tail-coverts fulvescent; under wing-coverts and axillaries ashy with whitish margins; quills below dusky, ashy along the inner edge, white towards the base of the latter. Total length 5 inches, culmen 0·4, wing 2·55, tail 2·1, tarsus 0·6.

Hab. Argentine Republic and Mendoza to Bolivia and Peru. Dr. Taczanowski records specimens of this species from Lima and Carumas, and Dr. Sclater identifies Whitely's skins from Pancatambo as belonging to the present species. Those obtained at Tinta are, however, *S. analoides* (vide *infrà*).

a. ♂ ad. sk.	Bolivia (*Bridges*).	Sclater Coll.
b. ♂ ad. sk.	Bolivia.	Sclater Coll.
c, *d*. ♂ ♀ ad. sk.	Bolivia.	Mr. H. Bridges [C.].
e. ♂ ad. sk.	Mendoza, Feb. 1871 (*Weisshaupt*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Cosquin, Cordova, Argentine Republic, June 19, 1882 (*E. W. White*).	Salvin-Godman Coll.

13. Spermophila analoides.

Fringilla analis (*nec d'Orb.*), *Lafr. Rev. Zool.* 1843, p. 291.
Linaria analoides, *Lafr. Rev. Zool.* 1847, p. 75.
Fringilla anatoides (!), *Gray, Gen. B.* ii. p. 372 (1849).
Catamenia analoides, *Bp. Consp.* i. p. 493 (1850); *Scl. P. Z. S.* 1858, pp. 455, 552; *id. Cat. Amer. B.* p. 105 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Berlepsch & Tacz. P. Z. S.* 1885, p. 85; *Tacz. Orn. Pérou*, iii. p. 20 (1886).
Catamenia analis (*nec d'Orb.*), *Sclater, P. Z. S.* 1855, p. 159; *id. & Salv. P. Z. S.* 1879, p. 606; *Berlepsch & Tacz. P. Z. S.* 1884, p. 293.
Gyrinorhynchus analoides, *Gray, Hand-l. B.* ii. p. 107, no. 7620 (1870).
Sporophila analoides, *Giebel, Thes. Orn.* iii. p. 517 (1877).

Adult male. Differs from *S. analis* in having less black on the chin and less white on the abdomen, which is more ashy; it is further distinguished by the absence of the large white speculum at the base of the primaries; these are margined with white, but the latter does not extend across the base of the feathers, as it does in *S. analis*. Total length 4·5 inches, culmen 0·3, wing 2·6, tail 1·95, tarsus 0·65.

Adult female. Very similar to the female of *S. analis*, but differing in the wing, the base of the primaries being merely edged with white, which does not occupy the base of both webs. Total length 4·5 inches, culmen 0·35, wing 2·6, tail 2·1, tarsus 0·65.

Hab. From Colombia to Ecuador, Peru, and Bolivia.

a, b. ♂ ♀ ad. sk.	Bogotá, Colombia (*G. Crowther*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Cuenca, Ecuador, Nov. 1857 (*L. Fraser*).	Sclater Coll.
d. ♂ ad. sk.	Ecuador.	Sclater Coll.
e. ♂ ad. sk.	Ecuador.	C. Buckley [C.].
f, g. ♂ ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Tinta, Peru, May 6, 1868 (*H. Whitely*).	Salvin-Godman Coll.
i. ♂ juv. sk.	Tinta, Peru, Jan. 1, 1868 (*H. Whitely*).	Sclater Coll.
k, l. ♂ ad. sk.	Sorata, Bolivia.	Salvin-Godman Coll.
m. ♂ ad. sk.	Sorata, Bolivia (*C. Buckley*).	Sclater Coll.

14. Spermophila castaneiventris.

Sporophila castaneiventris, *Cab. in Schomb. Reis. Guian.* iii. p. 679 (1848); *Licht. Nomencl. Av. Berol.* p. 46 (1854).

Spermophila castaneiventris, *Bp. Consp.* i. p. 495 (1850); *Scl. Cat. Amer. B.* p. 104 (1862); *id. & Salv. P. Z. S.* 1866, p. 181, 1869, p. 597; *Pelz. Orn. Bras.* p. 225 (1871); *Scl. Ibis*, 1871, p. 7; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *iid. P. Z. S.* 1873, pp. 185, 264; *Salv. Cat. Strickl. Coll.* p. 221 (1882); *Taczan. P. Z. S.* 1882, p. 17; *Salv. Ibis*, 1885, p. 214; *Taczan. Orn. Pérou*, iii. p. 12 (1886).

Gyrinorhynchus castaneiventris, *Gray, Hand-l. B.* ii. p. 106, no. 7610 (1870).

Adult male. General colour above blue-grey; lesser wing-coverts like the back; median and greater coverts black, tipped and edged with blue-grey; bastard-wing, primary-coverts, and quills black, edged with blue-grey, the inner secondaries broadly edged and tipped with ashy grey; the inner primaries with a tiny white spot at the base of the outer web, forming an almost obsolete alar speculum; upper tail-coverts like the back; tail-feathers blackish, edged with grey; crown of head blue-grey like the back, but a little more dusky, as also are the ear-coverts, cheeks, and sides of face; at the base of the mandible a small white spot; throat, breast, and abdomen deep chestnut; entire sides of body and flanks blue-grey; thighs also blue-grey; under tail-coverts deep chestnut; under wing-coverts and axillaries white, the coverts near the edge of the wing slaty grey; quills below dusky, white towards the base of the inner web: "bill and feet brown; iris dark brown" (*Stolzmann*). Total length 3·2 inches, culmen 0·35, wing 1·9, tail 1·4, tarsus 0·55.

The alar speculum in this species is nearly always hidden by the coverts. The depth of the chestnut colour on the underparts varies slightly in intensity, and in one male from Yquitos the wing-coverts and quills are washed with olive-green, probably the remains of immature plumage.

Adult female. Different from the male. General colour above brown, a little lighter and more ruddy on the lower back and rump; lesser wing-coverts like the back; median and greater coverts dusky

brown, edged with the same colour as the back, the greater series rather paler at the ends; bastard-wing, primary-coverts, and quills dusky brown, edged or narrowly fringed with olive-brown; upper tail-coverts like the back; tail-feathers brown, edged with olive-brown; crown of head like the back; lores, feathers round eye, ear-coverts, and under surface of body paler olive-brown than the back; the breast and abdomen pale ochreous buff; sides of body and flanks more olive-brown; thighs and under tail-coverts pale ochreous buff; under wing-coverts and axillaries white, tinged with olive-yellow; quills below dusky, ashy whitish along their inner edge. Total length 3·5 inches, culmen 0·3, wing 1·9, tail 1·4, tarsus 0·5.

Hab. Guiana and Colombia to Lower Amazonia and Peru.

a. ♀ ad. sk.	Bartica Grove, British Guiana, Feb. 16, 1880 (*H. Whitely*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Bartica Grove, British Guiana, Nov. 18, 1879 (*H. W.*).	Salvin-Godman Coll.
c. ♂ ad. sk.	British Guiana (*H. W.*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Guiana.	Sclater Coll.
e. ♂ ad. sk.	Pebas, E. Peru, Feb. 3, 1867 (*J. Hauxwell*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Yquitos, Upper Amazons, Sept. 2, 1878 (*H. W.*).	Salvin-Godman Coll.
g, h. ♂ ♀ ad. sk.	Nauta, Upper Amazons, April 1865.	E. Bartlett [C.].
i. ♀ ad. sk.	Lower Ucayali (*E. Bartlett*).	Sclater Coll.
k, l. ♂ ♀ ad. sk.	Cosnipata, Peru, Oct. 1868.	H. Whitely [C.].

15. Spermophila minuta.

Loxia minuta, *Linn. Syst. Nat.* i. p. 307 (1766).
Bouvreuil à ventre roux de Cayenne, *Daub. Pl. Enl.* v. pl. 319. fig. 3*.
Bec-rond à ventre roux, *Monib. Hist. Nat. Ois.* iv. p. 390 (1778).
Minute Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 158 (1783).
Loxia fusciventer, *Bodd. Tabl. Pl. Enl.* p. 20 (1783).
Pyrrhula minuta, *Vieill. N. Dict. d'Hist. Nat.* iv. p. 299 (1816); *id. & Bonn. Enc. Méth.* iii. p. 1026 (1823).
Spermophila minuta, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 495 (1850); *Scl. P. Z. S.* 1855, p. 160; *id. Cat. Amer. B.* p. 104 (1862); *id. & Salv. P. Z. S.* 1864, p. 352; *Lawr. Ann. Lyc. N. Y.* vii. p. 333 (1861); *E. C. Taylor, Ibis*, 1864, p. 83; *Wyatt, Ibis*, 1871, p. 328; *Scl. Ibis*, 1871, p. 3; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Layard, Ibis*, 1873, p. 380; *Scl. & Salv. P. Z. S.* 1879, p. 506; *Salv. Cat. Strickl. Coll.* p. 220 (1882); *Berlepsch, J. f. O.* 1884, p. 294; *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 351 (1884); *Salv. Ibis*, 1885, p. 214.
Spermophila fusciventris, *Gray, Gen. B.* ii. p. 386 (1884).
Sporophila minuta, *Cab. Mus. Hein.* Th. i. p. 150 (1850); *Licht. Nomencl. Av. Berol.* p. 45 (1854).
Gyrinorhynchus minutus, *Gray, Hand-l. B.* ii. p. 105, no. 7567 (1870).

* Not a very accurate drawing, the wing-spot being omitted.

Adult male. General colour above brown, with a slight wash of ashy olive, the lower back and rump chestnut: lesser wing-coverts like the back; median and greater coverts blackish, edged with ashy olive, paler on the ends of the greater series; bastard-wing, primary-coverts, and quills blackish brown edged with ashy, whitish on the margins of the primaries, the inner ones of which have a half-concealed spot of white at the base; upper tail-coverts ashy olive, slightly washed with chestnut on the edges; tail-feathers blackish brown, the centre ones shaded with ashy, all the feathers margined with paler brown, the tips also paler; crown of head like the back, with a slight reddish tinge on the forehead; lores dusky brown; ear-coverts light olive-brown, with paler shaft-lines; cheeks and entire under surface of body chestnut; a small spot of white at the base of the cheeks; thighs brown washed with chestnut; under tail-coverts chestnut; under wing-coverts ashy, with whitish edges; axillaries creamy white, slightly washed with rufous; quills below blackish brown, creamy white along the inner edge. Total length 4 inches, culmen 0·35, wing 2·05, tail 1·5, tarsus 0·55.

Adult female. Different from the male. General colour above uniform earthy brown with a slight olive tinge, the rump like the back; lesser wing-coverts like the back; median and greater coverts, as well as the bastard-wing, dark brown, edged rather broadly with ochreous buff, the bastard-wing more narrowly; primary-coverts and quills dark brown, edged with olive-brown, the secondaries broadly margined with ochreous buff like the greater coverts; upper tail-coverts like the back; tail-feathers dark brown, paler at tips, and edged with olive-brown; crown of head like the back; lores, eyelid, sides of face, ear-coverts, cheeks, and under surface of body pale ochreous brown, the throat a little paler and shaded with ashy, as also the fore neck; abdomen creamy buff; sides of body, flanks, thighs, and under tail-coverts ochreous buff; under wing-coverts and axillaries ochreous buff with ashy bases; quills below dusky, whitish along the inner edge. Total length 3·8 inches, culmen 0·35, wing 1·95, tail 1·55, tarsus 0·5.

The size of the white wing-spot varies greatly, and is very conspicuous in some specimens, and hardly perceptible in others.

There is apparently a seasonal plumage, when the bill is brown instead of black, the plumage browner, and the brown edges to the wing-coverts, quills, and tail-feathers broader and more conspicuous.

The skins from Panama appear to be somewhat smaller and to lack the white spot at the base of the cheeks; at least this is the case in the two males in the Salvin-and-Godman collection. The wing in these two birds is 2 inches, in Colombian examples 2·05, in those from Guiana 2·05–2·15, and from Tobago 1·95 inch.

The difference in intensity of the rufous colouring of the under surface is probably due to age, and has apparently nothing to do with locality (*cf.* Berlepsch, *l. c.*, and Salvin and Godman, Biol. p. 351).

The young male at first resembles the adult female, but is more decidedly olive above, and has traces of cinnamon colour on the

rump and on the under surface. There is considerable difference in the depth of the chestnut colour in a series of males, and the pale coloration of the young male tends to prove that the richness of tint increases with age, the younger birds inclining to cinnamon rather than chestnut.

Hab. From Panama through Colombia and Venezuela to Guiana; Trinidad; Tobago: Para.

a, b. ♂ ad.; *c, d, e.* ♀ ad. sk.	Lion Hill Station, Panama (*McLeannan*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Medellin, Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Bogotá, Colombia.	Sclater Coll.
i. ♂ ad. sk.	Georgetown, British Guiana (*Brown*).	Sclater Coll.
k. ♂ ad. sk.	British Guiana (*H. Whitely*).	Salvin-Godman Coll.
l. ♂ juv. sk.	Roraima, British Guiana, June 19, 1883 (*H. W.*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Roraima, Jan. 11, 1883 (*H. W.*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Roraima, Nov. 30, 1881 (*H. W.*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Cayenne.	Sclater Coll.
p, q. ♂ ♀ ad. sk.	Tobago (*Kirk*).	Sclater Coll.
r. ♂ ad. sk.	Para.	R. Graham, Esq. [P.].
s. ♂ ad. st.	S. America.	Purchased.

16. Spermophila hypoxantha.

Pico grueso pardo y canela, *Azara, Apunt.* i. p. 444 (1802).
Pyrrhula minuta (*nec L.*), *d'Orb. & Lafr. Syn. Av., Mag. de Zool.* 1837, p. 8.
Spermophila minuta (*nec L.*), *Hartl. Ind. Azara*, p. 8 (1847).
Sporophila hypoxantha, *Cab. Mus. Hein.* Th. i. p. 150, note (1850); *Licht. Nomencl. Av.* p. 45 (1854); *Burm. Th. Bras.* iii. p. 249 (1856, pt.).
Spermophila hypoxantha, *Pelz. Orn. Bras.* p. 225 (1871); *Scl. Ibis*, 1871, p. 3; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *id. P. Z. S.* 1879, p. 604; *Salv. Cat. Strickl. Coll.* p. 221 (1882).
Gyrinorhynchus hypoxanthus, *Gray, Hand-l. B.* ii. p. 105, no. 7584 (1870).

Adult male. General colour above pale slaty grey, the lower back and rump pale cinnamon-rufous, washed with ochre, a tinge of the latter colour being visible on the scapulars; lesser wing-coverts ochreous brown; median and greater coverts blackish brown, edged with ochreous brown, whitish near the end of the outer web; bastard-wing, primary-coverts, and quills blackish brown, edged with paler brown, more ochreous on the inner secondaries, the rest of the secondaries distinctly edged with hoary white, the primaries narrowly fringed with the same; the inner primaries white at the base of the outer web, forming a speculum; upper tail-coverts slaty grey; tail-feathers blackish, edged with ashy or ashy brown, and margined at the tip with whity brown; crown of head like the

back; lores a little paler ashy; sides of face, ear-coverts, cheeks, and entire under surface of body bright cinnamon-rufous, a little paler in the centre of the body; thighs whitish, washed with cinnamon, and ashy grey externally; under tail-coverts cinnamon-rufous; under wing-coverts whitish, washed with cinnamon; axillaries pale cinnamon; a large dusky patch near the edge of the wing, formed by the lower wing-coverts; quills below dusky, ashy whitish along the inner edge and towards the base. Total length 3·7 inches, culmen 0·3, wing 2·2, tail 1·5, tarsus 0·45.

Adult female. Different from the male. General colour above olive-brown, a little more sandy on the lower back and rump; lesser wing-coverts like the back; median and greater coverts, as well as the bastard-wing, primary-coverts, and quills dark brown, edged with olive-brown, the primares fringed with hoary grey, the inner ones white at the extreme base of the outer web, forming a small speculum; upper tail-coverts like the back; tail-feathers dark brown, fringed with olive-brown, and edged with whity brown at the tips; crown of head and sides of face like the back, the latter a little paler and more ochreous; throat and under surface of body pale ochreous buff, paler and more yellowish in the centre of the body; the thighs browner, and the under tail-coverts with a slight reddish tinge; under wing-coverts whitish washed with ochre, with a dusky patch formed by the outer coverts; axillaries white, washed with olive-yellow; quills below dusky, whitish along the inner edge and towards the base of the inner web. Total length 3·8 inches, culmen 0·35, wing 2·05, tail 1·5, tarsus 0·5.

Hab. Brazil.

a, b. ♂ ♀ ad. sk.	Curytiba, Brazil, Nov. 1820 (*J. Natterer*).	Sclater Collection.
c. ♀ ad. sk.	Bahia.	Sclater Collection.

17. Spermophila palustris. (Plate II.)

Spermophila palustris, *Barrows, Bull. Nutt. Orn. Club*, viii. p. 92 (1881).

Adult male. General colour above blue-grey, with slight indications of dusky centres on the feathers of the back; lower back and rump bright bay; wing-coverts blackish, edged with slaty grey; bastard-wing, primary-coverts, and quills blackish, edged with slaty grey, more hoary on the primaries, and broader on the inner secondaries, where the margins are white; the inner primaries white at the base of both webs, forming an alar speculum; upper tail-coverts blue-grey; tail-feathers dusky blackish, edged with slaty grey; crown of head like the back and lores: upper edge of eyelid also grey; lower eyelid, ear-coverts, cheeks, sides of neck, throat, and fore neck white; remainder of under surface bright chestnut; thighs ashy grey; under tail-coverts like the breast; under wing-coverts whitish with dusky bases; axillaries like the breast; quills below dusky, ashy along the inner edge, white at the base. Total length 3·9 inches, culmen 0·4, wing 2·15, tail 1·55, tarsus 0·55.

Adult female. Different from the male. General colour above dull olive-brown, slightly mottled with dusky bases to the feathers of the back: lesser wing-coverts like the back; median and greater coverts blackish, edged with pale brown; bastard-wing, primary-coverts, and quills blackish brown, edged with ashy brown, with a tiny white speculum formed by the white base of the inner primaries, the inner secondaries more broadly edged with pale brown; tail-feathers dusky brown, edged with olive-brown; crown of head like the back and slightly mottled with dusky centres; lores and lower eyelid ochreous buff; ear-coverts like the head; cheeks and under surface of body pale ochreous buff, including the thighs and under tail-coverts; sides of body and flanks washed with brown; under wing-coverts whitish, washed with yellow; axillaries like the breast but edged with olive-yellow; quills below dusky, white at base of inner web. Total length 3·8 inches, culmen 0·4, wing 2·15, tail 1·45, tarsus 0·5.

Hab. Argentine Republic.

a, b. ♂ ♀ ad. sk.	Concepcion, Argentine Republic (*Barrows*).		Sclater Coll.

18. Spermophila nigroaurantia.

Bouvreuil de l'isle de Bourbon, *Daubent. Pl. Enl.* v. pl. 204. fig. 1.
Bouveret, *Montb. Hist. Nat. Ois.* iv. p. 387 (1778).
Loxia bourbonensis, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 154 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 253.
Orange Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 146 (1783).
Loxia nigroaurantia, *Bodd. Tabl. Pl. Enl.* p. 12 (1783).
Loxia aurantia, *Gm. Syst. Nat.* i. p. 853 (1788).
Pyrrhula pyrrhomelas, *Bonn. et Vieill. Enc. Méth.* ii. p. 1027 (1823).
Loxia brevirostris, *Spix, Av. Bras.* ii. p. 47, pl. 59. figs. 1, 2 (1825).
Pyrrhula capistrata, *Vigors, Zool. Journ.* v. p. 273 (1830).
Loxia fraterculus, pt., *Cuv. Mus. Paris.*; *Less. Traité*, p. 451 (1831).
Spermophila rubiginosa, *Swains. Classif. B.* ii. p. 294 (1837).
Spermophila nigroaurantia, *Gray, Gen. B.* ii. p. 386 (1844); *Sclater, Ibis*, 1871, p. 4; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *W.A. Forbes, Ibis*, 1881, p. 335; *Salv. Cat. Strickl. Coll.* p. 221 (1882).
Spermophila pyrrhomelas, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 495 (1850).
Sporophila aurantia, *Cab. Mus. Hein.* Th. i. p. 151 (1851); *Burm. Th. Bras.* iii. p. 250 (1856).
Spermophila aurantia, *Sclater, Cat. Amer. B.* p. 104 (1862); *Pelz. Orn. Bras.* p. 226 (1871).
Gyrinorhynchus nigroaurantius, *Gray, Hand-l. B.* ii. p. 105, no. 7568 (1870).

Adult male. General colour above cinnamon-rufous, a little deeper in tint on the lower back and rump; the scapulars slightly mottled with black bases; wing-coverts black, the lesser series edged with ashy, the median and greater coverts margined with ashy reddish, the latter more broadly; bastard-wing, primary-coverts, and quills blackish, edged with hoary brown, whitish on the primaries, the inner secondaries broadly margined with pale brown; the middle

primaries white at the base of the outer web, forming a speculum; upper tail-coverts black, tipped with brown; tail-feathers black, narrowly tipped with whity brown and margined with pale brown; crown of head glossy black as far as the occiput; nape, hind neck, and sides of neck like the back; lores whitish; eyelid black above, cinnamon below; ear-coverts, cheeks, and under surface of body cinnamon-rufous, washed with ashy; the sides of body, flanks, thighs, and under tail-coverts deeper cinnamon; under wing-coverts and axillaries white, with a blackish patch near the outer edge of the wing; quills below dusky, the inner edge ashy, whitish at base. Total length 3·8 inches, culmen 0·35, wing 2, tail 1·55, tarsus 0·5.

In winter the male will probably be found to have the feathers of the crown always edged with brown, one specimen from Bahia in the Sclater collection showing this peculiarity.

The only male in the collection from Rio has the black crown continued to the hind neck, the black ending somewhat in a point on the nape in all the Bahia specimens.

Adult female. General colour above olive-brown; lesser wing-coverts like the back; median and greater coverts brown, edged with olive and tipped with yellowish white; bastard-wing, primary-coverts, and quills brown, edged with olive, a little more ashy towards the end of the inner secondaries; upper tail-coverts like the back; tail-feathers brown, edged with olive, and paler at the ends of the outer feathers; crown of head like the back; lores, feathers round eye, ear-coverts, cheeks, throat, and fore neck ochreous buff with an olive tinge; centre of breast and abdomen yellowish white; sides of body and flanks olive-brown; thighs yellowish white; under tail-coverts ochreous buff, slightly tinged with olive; under wing-coverts and axillaries white with a slight olive-yellow tinge; quills below dusky, ashy along the inner edge. Total length 3·9 inches, culmen 0·35, wing 2·05, tail 1·6, tarsus 0·55.

The young male resembles the old female, but is rather darker brown, the quills blacker with a large white wing-spot. The under surface of the body also is more tawny in colour.

Hab. Southern Brazil.

a, b. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
c. ♂ juv. sk.	Pernambuco (*W. A. Forbes*).	Sclater Coll.
d. ♂ ad. sk.	Para.	R. Graham, Esq. [P.].
e. ♂ ad. sk.	Bahia.	Sclater Coll.
f, g, h. ♂ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Brazil (*Natterer*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad. sk.	Rio de Janeiro.	Sclater Coll.
m. ♂ juv. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
n. ♂ ad. sk.	South America.	Purchased.

19. Spermophila nigrorufa.

Pyrrhula nigrorufa, *D'Orb. & Lafr. Syn. Av.* p. 87 (1837).
Spermophila nigrorufa, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 495 (1850); *Pelz. Orn. Bras.* p. 226 (1871); *Scl. Ibis*, 1871,

p. 6, pl. i. figs. 1, 2; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1872); *id. P. Z. S.* 1879, p. 604.
Sporophila nigrorufa, *Cab. Mus. Hein.* Th. i. p. 150, note (1850).
Gyrinorhynchus nigrorufus, *Gray, Hand-l. B.* ii. p. 105, no. 7583 (1870).

Adult male. General colour above black, the mantle, back, and scapulars with remains of sandy-coloured tips to the feathers; lower back and rump cinnamon-rufous; wing-coverts black, with sandy margins to the feathers, white on the tips of the greater coverts; bastard-wing, primary-coverts, and quills black, the inner primaries white at the base of the outer web, forming a speculum, the inner secondaries edged with white or ashy white; upper tail-coverts and tail-feathers black, fringed with sandy buff or whity brown at the tip; crown of head black; hind neck black in the centre, the sides of the neck pale cinnamon-buff, almost forming a collar; lores white; feathers round eye black; ear-coverts, cheeks, throat, and under surface of body cinnamon-buff, deeper and richer in colour on the breast, sides of the body, and flanks; centre of abdomen slightly paler; thighs pale cinnamon with black bases; under tail-coverts like the breast; under wing-coverts white, with black bases, with a patch of black near the edge of the wing; axillaries like the breast; quills below dusky, white at the base of the inner web. Total length 3·8 inches, culmen 0·3, wing 1·95, tail 1·5, tarsus 0·55.

Adult female. Different from the male. General colour above brown, slightly mottled with darker centres to the feathers of the back; rump more fulvescent and slightly tinged with tawny; lesser wing-coverts like the back; median and greater coverts blackish, edged with paler brown, fulvescent on the margins; bastard-wing, primary-coverts, and quills blackish, edged with brown, the inner primaries white at the base of the outer web, forming a small alar speculum, the inner secondaries margined with whity brown; upper tail-coverts and tail-feathers brown, edged with lighter brown, much paler at the ends of the latter; crown of head like the back, minutely mottled with dusky centres to the feathers; lores whitish; ear-coverts like the crown, but slightly washed with ochre; cheeks and under surface of body ochreous buff, inclining to pale tawny on the sides of body and flanks; thighs and under tail-coverts ochreous buff, the latter centred with cinnamon; under wing-coverts dusky brown, edged with ochreous buff; axillaries like the breast; quills below dusky, white towards the base of the inner web. Total length 4 inches, culmen 0·35, wing 2, tail 1·45, tarsus 0·5.

Hab. Bolivia and Southern Brazil.

a, b. ♂ ♀ ad. sk.	Matogrosso, Brazil, Oct. 1826 (*J. Natterer*).	Sclater Coll.

20. Spermophila pileata.

Loxia fraterculus, *Cuv. MSS. in Mus. Paris.*; *Less. Traité*, p. 451 (1831).
Sporophila mitrata, *Licht. Nomencl. Av.* p. 44 (1854, descr. nullâ).
Sporophila alaudina (*nec D'Orb. & Lafr.*), *Burm. Th. Bras.* ii. p. 251 (1856).

Pyrrhula pileata, *Natterer, MSS., undè*
Spermophila pileata, *Sclater, P. Z. S.* 1864, p. 607; *id. Orn. Bras.* p. 226 (1871); *Scl. Ibis*, 1871, p. 5, pl. i. fig. 3; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873).
Gyrinorhychus pileatus, *Gray, Hand-l. B.* ii. p. 106, no. 7598 (1870).
Sporophila pileata, *Giebel, Thes. Orn.* iii. p. 522 (1877).

Adult male. General colour above pale brown, with concealed blackish centres to the feathers, which have ashy-whitish margins; rump more uniform fulvous brown; wing-coverts blackish, edged with pale brown; bastard-wing, primary-coverts, and quills blackish brown, fringed with paler brown, the secondaries edged with whitish, the inner primaries white at the base of the outer web, forming a distinct speculum; upper tail-coverts and tail-feathers blackish brown, edged with paler brown and fringed with whitish at the tips; crown of head and nape black, forming a cap, the latter with ashy edges to the feathers; hind neck like the back; lores and eyelid black; ear-coverts, cheeks, and under surface of body isabelline with a reddish tinge, especially on the sides of body and flanks; centre of abdomen white; thighs like the breast, with blackish bases; under tail-coverts pale reddish like the flanks; under wing-coverts and axillaries white, with a patch of black near the edge of the wing; quills below dusky, with a large patch of white at the base of the inner web. Total length 3·8 inches, culmen 0·3, wing 2·1, tail 1·5, tarsus 0·5.

The male procured by Natterer in March has evidently been breeding and is in very worn plumage. The abrasion of the light margins of the feathers of the hind neck leaves the black cap more strongly defined, and the white edges to the inner secondaries have been worn off.

Hab. Brazil.

a. ♂ ad. sk.	San Paulo, Brazil, Nov. 21, 1822 (*J. Natterer*)	Sclater Coll. (Type of species.)
b. ♂ ad. sk.	Ytararé, Brazil, March 3, 1821 (*J. Natterer*).	Salvin-Godman Coll.

21. Spermophila cucullata.

? Loxia collaria, *Linn. Syst. Nat.* i. p. 305 (1766) *.
? Gros-bec appelé la Nonette, *Daubent. Pl. Enl.* iv. pl. 393. fig. 3.
Gros-bec d'Angola, *Daubent. op. cit.* iv. pl. 659. fig. 2.
? Loxia nonette, *P. L. S. Müll. S. N.*, Anhang, p. 151 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 253.
Black-breasted Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 148 (1783).
Loxia cucullata, *Bodd. Tabl. Pl. Enl.* p. 24 (1783).
Loxia collaris, *Bodd. t. c.* p. 40.

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* A name inadmissible, as it is extremely doubtful whether it refers to this species, as has already been remarked by Mr. Salvin. Where the birds are so closely allied, it is doubtful whether any of the ancient descriptions and figures are accurate enough for any identification which can be more than mere guesswork.

? Loxia americana, *Gm. Syst. Nat.* i. p. 863 (1788).
Loxia pectoralis, *Lath. Ind. Orn.* i. p. 390 (1790).
Fringilla pectoralis, *Licht. Verz. Doubl.* p. 26 (1823).
Fringilla atricapilla, *Neuwied, Beitr. Naturg. Bras.* iii. p. 569 (1830).
Spermophila collaria, *Gray, Gen. B.* ii. p. 386; *id. Hand-l. B.* ii. p. 106, no. 7595 (1870); *Scl. Ibis*, 1871, p. 9; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Salv. Ibis*, 1885, p. 214.
Spermophila pectoralis, *Gray, Gen. B.* ii. p. 386 (1844).
Sporophila americana, *Cab. in Schomb. Reis. Guian.* iii. p. 678 (1848); *id. Mus. Hein.* Th. i. p. 150 (1850).
Spermophila americana, *Bp. Consp.* i. p. 496 (1850).
Sporophila pectoralis, *Burm. Th. Bras.* iii. p. 246 (1856).
Spermophila cucullata, *Pelz. Orn. Bras.* pp. 223, 437 (1871).

Adult male. General colour above black, the scapulars and lower back ashy grey, the latter washed with ochre; across the rump a band of deep ochre; wing-coverts blackish, edged with ashy grey, the inner lesser coverts bright ochre, and the inner median coverts also tipped with bright ochre; bastard-wing, primary-coverts, and quills blackish, edged with ashy, the secondaries with hoary grey, the inner primaries externally white at the base, forming a large speculum; upper tail-coverts blackish, broadly edged with dark ashy; tail-feathers blackish, edged with brown and narrowly tipped with paler brown; crown of head, nape, and hind neck black like the mantle; lores with a creamy-buff spot; feathers round eye and ear-coverts black; a patch below the fore part of the eye creamy buff; cheeks and throat creamy buff, washed with ochre; sides of neck rich ochre, extending backwards so as almost to form a collar; fore neck with a broad black band; chest and under surface of body pale tawny buff; thighs white, black posteriorly; under tail-coverts rather deeper tawny buff; under wing-coverts and axillaries white; quills below dusky, white towards the base of the inner web; bill greyish horn-colour; base of bill greyish black, the point yellowish. Total length 5 inches, culmen 0·45, wing 2·35, tail 2·05, tarsus 0·6.

Adult female. Different from the male. General colour above brown, slightly washed with olive on the head and back; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with lighter brown; bastard-wing, primary-coverts, and quills dusky brown, margined with olive-brown; upper tail-coverts and tail-feathers dark brown, with paler brown margins; lores, sides of face, ear-coverts, cheeks, and under surface of body light tawny buff, paler on the abdomen; under tail-coverts deep tawny buff; under wing-coverts and axillaries whitish, washed with yellowish buff. Total length 4·5 inches, culmen 0·45, wing 2·2, tail 1·85, tarsus 0·6.

Hab. Northern Brazil to Guiana. It is, however, impossible to give the exact ranges of any of these allied species, as the synonymy has been so confused, and the series examined has been extremely small.

a. ♂ ad. sk.	Cuyaba, Brazil (*Natterer*).	Sclater Coll.
b. ♂ ad. sk.	Brazil.	Purchased.
c. ♀ ad. sk.	Bahia.	Sclater Coll.

Subsp. α. **Spermophila polionota.**

Sporophila collaria, *Burm. Th. Bras.* iii. p. 246 (1856, *nec auct.*).
Spermophila cucullata, *Scl. Cat. Amer. B.* p. 103 (1862, *nec Bodd.*).
Spermophila atricapilla, *Pelz. Orn. Bras.* pp. 223, 437 (1871, *nec Neuwied*).

Adult male. Similar to *S. cucullata*, but wanting the ochreous buff on the underparts, rump, and sides of neck, all of which are whitish; lower back and thighs ashy grey. Total length 4·5 inches, culmen 0·45, wing 2·35, tail 1·8, tarsus 0·6.

Adult female. General colour above brown, the lower back and rump rather paler and more sandy; lesser wing-coverts like the back; median and greater coverts blackish brown, edged with paler brown, the inner ones tipped with tawny buff; bastard-wing, primary-coverts, and quills dark brown, edged with paler brown, the inner primaries yellowish white at the base of the outer web, forming a speculum; upper tail-coverts and tail-feathers dark brown, edged with paler brown, especially the outermost feather; crown of head like the back; lores whitish; ear-coverts pale olive-brown; sides of neck yellowish buff, recalling the half-collar of the male; cheeks, throat, and under surface of body yellowish buff, more tawny on the abdomen, flanks, thighs, and under tail-coverts; under wing-coverts and axillaries like the breast; quills below dusky, white along the inner edge. Total length 4·5 inches, culmen 0·45, wing 2·25, tail 1·9, tarsus 0·6.

Hab. Brazil.

a. ♂ ad. sk.	Brazil.	Maison Verreaux.
b. ♂ ad. sk.	Rio.	Sclater Coll.
c. ♀ ad. sk.	Rio (*Natterer*).	Sclater Coll.

22. **Spermophila melanocephala.**

Pico grueso cejita blanca, *Azara, Apunt.* i. p. 448 (1802).
Coccothraustes melanocephala, *Vieill. N. Dict. d'Hist. Nat.* xiii. p. 542 (1817).
? Pyrrhula melanocephala, *D'Orb. & Lafr. Syn. Av. in Mag. de Zool.* 1837, p. 85.
Spermophila melanocephala, *Gray, Gen. B.* ii. p. 386 (1844); *Hartl. Ind. Azara*, p. 9 (1847).
Spermophila lafresnayii, *Bp. Consp.* i. p. 496 (1853); *Gray, Hand-l. B.* ii. p. 105, no. 7571 (1870).

Adult male. Similar to *S. cucullata*, but distinguished by the broad band of deep cinnamon or chestnut which occupies the lower back as well as the rump; the sides of the neck and the underparts are also deep cinnamon, becoming chestnut on the lower flanks and under tail-coverts. Total length 5 inches, culmen 0·45, wing 2·45, tail 2, tarsus 0·6.

Hab. Southern Brazil, extending to Corrientes and probably to Bolivia.

a. ♂ ad. sk.	Punta Lara, Buenos Ayres, Oct. 19, 1875.	Henry Durnford, Esq. [C.].

23. Spermophila torqueola.

Spermophila torqueola, *Bp. Consp.* i. p. 495 (1850); *Scl. P. Z. S.* 1858, p. 303; *id. Cat. Amer. B.* p. 105 (1862); *Dugès, La Nat.* p. 351 (1868); *Scl. Ibis*, 1871, p. 6; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 276 (1874); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 351 (1885).
Fringilla ochropyga, *Licht. MSS. in Mus. Berol.*
Sporophila ochropyga, *Licht. Nomencl. Av. Berol.* p. 45 (1854); *Cab. J. f. O.* 1861, p. 5.
Gyrinorhynchus torqueolus, *Gray, Hand-l. B.* ii. p. 105, no. 7586 (1870).
Gyrinorhynchus atriceps, *Gray, Hand-l. B.* ii. p. 106, no. 7587 (1870).
Sporophila torqueola, *Gicbel, Thes. Orn.* iii. p. 523 (1871).

Adult male. General colour above black, the lower back and rump light cinnamon-rufous; wing-coverts and quills black, the median coverts with a few sandy-buff tips to the feathers (probably remains of winter plumage); the inner primaries white at the base of the outer web, forming a distinct alar speculum; upper tail-coverts and tail-feathers black, the latter fringed with pale brown at the ends; crown of head black like the back, as also the lores, sides of face, and ear-coverts; behind the latter a large patch of white on the sides of the neck, forming a half-collar; cheeks and under surface of body tawny rufous, the throat rather paler; fore neck black, forming a collar; thighs white, black posteriorly; under tail-coverts like the breast; under wing-coverts and axillaries white; quills below dusky, edged with ashy, white at the base: "bill and legs blackish; iris brown" (*Grayson*). Total length 4·7 inches, culmen 0·4, wing 2·3, tail 2, tarsus 0·55.

The *seasonal plumage of the adult male* is brown, all the black feathers of the upper surface having sandy-brown edges, which are doubtless shed at the breeding-season; the white patch at the sides of the neck is also tinged with sandy buff.

The *young male* resembles the adult male in seasonal plumage, being brown instead of black. At first the black collar on the fore neck is altogether absent, and when assumed it is much narrower than in the adult male. The reddish colour of the underparts is also much paler.

Adult female. Different from the male. General colour above very pale olive-brown, rather more ashy olive on the head and neck; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with olive-brown, rather more ruddy on the ends of the latter series; bastard-wing and primary-coverts dusky brown, obsoletely fringed with olive-brown; quills dusky brown, edged with olive-brown, a little ruddy in tint on the inner secondaries; upper tail-coverts like the back; tail-feathers dusky brown, with pale olive-brown margins; lores, sides of face, and under surface of body paler olive-brown than the upper surface; the abdomen, lower flanks, and under tail-coverts pale sandy buff;

under wing-coverts and axillaries whitish, washed with pale olive; quills below dusky, edged with ashy, whitish towards the base. Total length 4·25 inches, culmen 0·4, wing 1·95, tail 1·7, tarsus 0·6.

Hab. Mexico.

a, b. ♂ ♀ ad. sk.	Mexico.	Sclater Coll.
c. ♂ imm. sk.	Silao, Mexico.	Sclater Coll.
d. ♀ ad. sk.	Mazatlan, Dec. 8 (*A. Forrer*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Mazatlan, Jan. 4 (*A. Forrer*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Presidio, Mexico, Dec. 22 (*A. Forrer*).	Salvin-Godman Coll.
g. ♂ ad. st.	Mexico.	Purchased.

24. Spermophila albitorquis.

Adult male. Similar to *S. torqueola*, but distinguished by a white collar round the hind neck. Total length 4·4 inches, culmen 0·35, wing 2·25, tail 1·85, tarsus 0·6.

Hab. Mexico.

a. ♂ ad. sk.	Mexico.	Sclater Coll.
b. ♂ ad. sk.	Capulalpam, S. Mexico, Oct. 1860 (*A. Sallé*).	Salvin-Godman Coll.

25. Spermophila ophthalmica.

Spermophila ophthalmica, *Sclater, P. Z. S.* 1860, pp. 276, 293; *id. Cat. Amer. B.* p. 103 (1862); *id. Ibis*, 1871, p. 11; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Berlepsch & Taez. P. Z. S.* 1883, p. 550; *Taez. & Berlepsch, P. Z. S.* 1884, p. 84.
Gyrinorhynchus ophthalmicus, *Gray, Hand-l. B.* ii. p. 106, no. 7599 (1870).

Adult male (type of species). General colour above glossy black, the lower back and rump whiter, but mottled with black and grey, the bases of the feathers being grey, the tips pure white with a subterminal bar of black; lesser wing-coverts black, edged with white, the median and greater coverts black, the latter with a linear streak of white at the ends; bastard-wing, primary-coverts, and quills black, with a white base, concealed on all but the middle primaries, which have the base of the outer web white so as to form an alar speculum; upper tail-coverts and tail-feathers black; crown of head, lores, sides of face, and ear-coverts black, with a tiny spot of white below the eye: cheeks, throat, and sides of neck white: fore neck crossed by a black band, widening out on the sides of the chest; breast and abdomen white, as well as the sides of body and flanks, the latter slightly mottled with black bases to the feathers; thighs, under tail-coverts, under wing-coverts, and axillaries white, with a small patch of black near the edge of the wing; quills below blackish, the inner edge white, increasing towards the base. Total length 4 inches, culmen 0·4, wing 2·25, tail 1·65, tarsus 0·6.

Adult female. General colour above light brown, somewhat ashy on the head and mantle, the lesser wing-coverts like the back; median and greater coverts blackish, edged with light brown, tinged with rufous; bastard-wing, primary-coverts, and quills dusky brown, edged with pale brown, the primaries fringed with ashy; upper tail-coverts and tail-feathers light brown, with paler brown margins; lores fulvous; eyelid buffy white; ear-coverts, cheeks, and under surface of body light fulvous brown, whiter along the centre of the breast and abdomen: sides of body and flanks pale brown, as also the thighs and under tail-coverts; under wing-coverts white, faintly washed with brown; axillaries white; quills below dusky, white towards the base of the inner edge. Total length 4·3 inches, culmen 0·4, wing 2·15, tail 1·75, tarsus 0·6.

Hab. Ecuador.

a, b. ♂ ♀ ad. sk.	Babahoyo, Ecuador (*L. Fraser*).	Sclater Coll. (Types of species.)
c. ♂ ad. sk.	Esmeraldas, Ecuador, Dec. 1859 (*L. Fraser*).	Sclater Coll.
d. ♂ juv. sk.	Esmeraldas, Nov. 1859.	L. Fraser, Esq. [C.].
e. ♂ ad. sk.	Ecuador (*C. Buckley*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Santa Rita Mountains, Ecuador (*Villagomez*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Choco Bay.	Capt. Kellett and Lieut. Wood [P.].
h. ♂ ad. sk.	Ecuador.	Gould Coll.

26. Spermophila lineata.

Radiated Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 156 (1783).
Loxia lineata, *Gm. S. N.* i. p. 858 (1788) *.
? Pico grueso negro y blanco, *Azara, Apunt.* i. p. 458 (1802) †.
? Coccothraustes leucoptera, *Vieill. N. Dict. d'Hist. Nat.* xiii. p. 521 (1817, *ex Azara*).
Pyrrhula misya, *Vieill. Ois. Chant.* pl. 46 (1805).
Loxia leucopterygia, *Spix, Av. Bras.* ii. p. 45, pl. lviii. fig. 3 (1825).
? Spermophila leucoptera, *Hartl. Ind. Azara*, p. 9 (1847).
Spermophila mysia, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 496 (1850); *Scl. Cat. Amer. B.* p. 104 (1862).
Spermophila leucopterygia, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 496 (1850).
Sporophila lineata, *Burm. Th. Bras.* iii. p. 245 (1856).
Spermophila lineata, *Scl. Cat. Amer. B.* p. 104 (1862); *id. & Salv. P. Z. S.* 1867, p. 572; *Pelz. Orn. Bras.* p. 438 (1871); *Scl. Ibis*, 1871, p. 11; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Salv. Ibis*, 1885, p. 214.

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* The description is bad, and is very doubtfully referable to the present species. Traditional usage, however, has sanctioned its application, and no change in these present days is desirable.

† According to Sclater, but the locality places some doubt on the identification.

Gyrinorhynchus lineatus, *Gray, Hand-l. B.* ii. p. 105, no. 7569 (1870).
Gyrinorhynchus mysia, *Gray, t. c.* p. 105, no. 7577 (1870).

Adult male. General colour above glossy greenish black, the lower back and rump ashy grey, with remains of dusky blackish subterminal markings, producing a mottled appearance; lesser wing-coverts black, with ashy-whitish edges; median and greater coverts black, tipped with white, the former very distinctly, so as to form a patch; bastard-wing, primary-coverts, and quills black, the inner primaries white at the base of the inner web, forming a speculum; upper tail-coverts greenish black, fringed with ashy; tail-feathers black, with a narrow ashy edging on the tips; crown of head greenish black, as also the lores, sides of face, and ear-coverts; the lower eyelid with a tiny spot of white; cheeks, throat, and sides of neck white, followed by a black band across the fore neck, the sides of the upper breast being also black; centre of breast and abdomen white; sides of body and flanks ashy grey; thighs dusky blackish; under tail-coverts white; under wing-coverts and axillaries white, with a blackish patch near the outer edge of the wing; quills below blackish, ashy along the inner edge and towards the base of the quills. Total length 4·5 inches, culmen 0·45, wing 2·35, tail 1·85, tarsus 0·6.

Some specimens have the feathers of the lower back and rump tipped with ashy whitish, but I am unable to say whether these white-rumped specimens are in seasonal plumage or not. Some of them have ashy edges to the upper tail-coverts and certain of the dorsal plumes. Several specimens, apparently quite adult, have the black collar interrupted in the centre, but whether this indicates immaturity I have not been able to discover.

Adult female. Different from the male. General colour above olive-brown, a little more fulvescent on the rump; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with pale brown, a little more olive on the primaries; tail-feathers dusky brown, margined with olive-brown; crown like the back; lores and feathers round the eye ashy whitish; ear-coverts pale olive-brown, streaked with ashy whitish; under surface of body ochreous buff, browner on the flanks and sides of the body: centre of breast and abdomen dull white, tinged with yellow; axillaries and under wing-coverts white, edged with yellow; edge of wing yellow; quills below dusky, ashy whitish along the edge of the inner web. Total length 4·2 inches, culmen 0·45, wing 2·25, tail 1·65, tarsus 0·7.

Hab. Guiana and Amazonia.

a. ♂ ad. sk.	Cayenne.	Purchased.
b. ♂ ad. sk.	Cayenne.	Sclater Coll.
c. ♂ ad. sk.	Georgetown, British Guiana (*Brown*).	Sclater Coll.
d, *e*. ♂ ♀ ad. sk.	Bartica Grove, British Guiana, Feb. 20, 1880 (*H. Whitely*).	Salvin-Godman Coll.

f, g. ♂ ♀ ad. sk.	Bartica Grove, Sept. 25, 1879 (*H. W.*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Albina, Surinam, March 27, 1866 (*C. Bartlett*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Brazil.	Sclater Coll.
k. ♂ ad. sk.	Island of Mexiana, Jan. 19, 1849 (*A. R. Wallace*).	Sclater Coll.
l. ♂ juv. sk.	Island of Mexiana, Jan. 1849, (*A. R. W.*).	Salvin-Godman Coll.
m. ♂ ad. sk.	North side of R. Amazon (*A. R. W.*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Para, Oct. 1848 (*A. R. W.*).	Salvin-Godman Coll.
o, p. ♂ ad. et juv. sk.	Para.	Sclater Coll.
q, r. ♂ ♀ ad. sk.	Para.	R. Graham, Esq. [P.].
s. ♂ ad. sk.	Brazil.	Gould Coll.

27. Spermophila moreleti.

Spermophila morelleti, *Bp. Consp.* i. p. 497 (1850); *Lawr. Ann. Lyc. N. Y.* ix. p. 102 (1868); *Frantz. J. f. O.* 1869, p. 381.
Spermophila moreleti, *Scl. & Sal. Ibis*, 1859, p. 17; *Salv. t. c.* p. 468; *Scl. Cat. Amer. B.* p. 105 (pt.); *Scl. & Salv. P. Z. S.* 1870, p. 36; *Scl. Ibis*, 1871, p. 10 (pt.); *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873, pt.); *Salv. Cat. Strickl. Coll.* p. 222 (1882); *Boucard, P. Z. S.* 1883, p. 444; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 352 (1885, pt.).
Sporophila morelleti, *Cab. J. f. O.* 1861, p. 4.
Gyrinorhynchus morelleti, *Gray, Hand-l. B.* ii. p. 105, no. 7572 (1870).

Adult male. General colour above black, with a broad band of white across the rump; wing-coverts black, tipped with white; bastard-wing, primary-coverts, and quills black, the middle primaries white at the base of the outer web, forming an alar speculum; upper tail-coverts and tail-feathers black; crown of head black like the back; lores, feathers round eye, ear-coverts, and cheeks black; malar line, throat, and sides of neck white, the latter extending backwards and forming a half-collar; fore neck black, forming a broad collar; remainder of under surface white, with a slight tinge of ochreous buff; thighs black, tipped with white; under tail-coverts creamy white; under wing-coverts and axillaries white; quills below black, white at the base of the inner web. Total length 3·6 inches, culmen 0·35, wing 2·05, tail 1·6, tarsus 0·6.

Adult female. Similar to the female of *S. parva*, fully described below. Total length 4 inches, culmen 0·35, wing 1·85, tail 1·55, tarsus 0·6.

Young male. At first resembling the adult female and then gaining the full black plumage by a moult. Both the black head and the black collar across the fore neck are developed under the brown or buff feathers, but notwithstanding this fact they seem to make their first mature appearance by a direct moult and not by the shedding of the light edges to the feathers.

Hab. From Yucatan to Guatemala, Honduras, and Costa Rica.

a, b. ♂ ad. et juv. sk.	Merida, N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
c, d. Juv. sk.	Mugeres Island, Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
e. ♂ jnv. sk.	Meco Island, Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Corosal, British Honduras (*Roe*).	Salvin-Godman Coll.
h, i. ♂ ad. sk.; *k.* ♀ ad. sk.	Guatemala (*G. U. Skinner*).	J. Gould, Esq.
l. ♂ ad. sk.	Guatemala.	Sclater Coll.
m. ♂ ad. sk.	Vera Paz, Guatemala (*Hague*).	Salvin-Godman Coll.
n, o. ♂ ♀ ad. sk.	Honduras.	Sclater Coll.
p. ♂ ad. sk.	Medina, Honduras (*G. M. Whitely*).	Salvin-Godman Coll.
q. ♂ ad. sk.	San Pedro, Honduras (*G. M. Whitely*).	Salvin-Godman Coll.
r. ♀ ad. sk.	Belize, Honduras (*O. S.*).	Salvin-Godman Coll.
s. ♂ ad. sk.	San José, Costa Rica (*J. Carmiol*; Sm. no. 33353).	Salvin-Godman Coll.
t. ♀ ad. sk.	Grecia, Costa Rica (*J. Carmiol*; Sm. no. 41389).	Salvin-Godman Coll.
u, v. ♂ ♀ ad. sk.	Turrialba, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
w, x. ♂ ad.; *y.* ♂ juv. sk.	Irazu district, Costa Rica (*J. Rogers*).	Salvin-Godman Coll.

28. Spermophila parva.

Sporophila morelleti, *Cab. Mus. Hein.* Th. i. p. 150 (1850, *nec Bp.*).
Spermophila morelleti, *Scl. P. Z. S.* 1856, p. 302 (*nec Bp.*).
Spermophila moreleti (*nec Bp.*), *Baird, B. N. Amer.* p. 506 (1858); *id. U. S. & Mex. Bound. Surv., Birds*, p. 17 (1858); *Scl. P. Z. S.* 1859, pp. 365, 378; *id. Cat. Amer. B.* p. 105 (1862, pt.); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869); *Scl. Ibis*, 1871, p. 10 (pt.); *Coues, Key N. Amer. B.* p. 150 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 91 (1874); *Sennett, Bull. U. S. Geol. Surv.* v. p. 393 (1879); *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 182 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 392 (1884).
Spermophila albigularis (*nec Spix*), *Lawr. Ann. Lyc. N. Y.* v. p. 124 (1851).
Spermophila parva, *Lawr. Ann. N. Y. Acad. Sci.* ii. p. 381 (1883)*; *Salv. & Godm. Biol. Centr-Amer., Aves*, i. p. 357 (1885).

Adult male. General colour above black, the rump and lower back brown, as well as other scattered feathers on the upper surface (indications of seasonal plumage); wing-coverts black, with small and

* The type of this species, lent to Mr. Salvin by the U.S. National Museum, has been shown to me by him. The specimen is a female, and is undoubtedly of the same species as the Texas and Mexican *Spermophila*, generally called *S. moreleti*. In the British Museum is a very old skin marked "type of *S. mexicana*, Sw.," but I have not been able to discover where Swainson published this name, and I have therefore adopted that given by Mr. Lawrence.

nearly obsolete white tips to the median and greater series; bastard-wing, primary-coverts, and quills black, the inner primaries and the secondaries white at the base of the outer web, forming a double speculum, the latter concealed by the greater wing-coverts; upper tail-coverts and tail-feathers black, the tips fringed with ashy grey; crown of head, lores, sides of face, and ear-coverts black; lower edge of eyelid, cheeks, throat, and sides of neck white; a black collar across the fore neck: remainder of under surface white, tinged with yellowish buff, especially on the lower abdomen, flanks, and under tail-coverts; under wing-coverts and axillaries whitish, mottled with dusky bases; quills below dusky blackish, edged with ashy, and white at the base of the inner web. Total length 4 inches, culmen 0·35, wing 1·95, tail 1·65, tarsus 0·6.

The *male in seasonal plumage* more resembles the female, being generally of an ochreous-brown shade, through which the underlying black plumage is perceptible. The full plumage is gained by the shedding of these brown ends to the feathers. The under surface of the body is rich ochreous buff and the black collar is completely hidden, but can be discovered underneath the light overlying plumage. The white wing-bars are very broad and distinct, as also are the broad ashy-brown ends to the tail-feathers.

Adult female. Different from the male. General colour above dull ochreous brown with a slight olive tinge; lower back, rump, and upper tail-coverts clearer ochreous brown; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with the same colour as the back, and tipped with yellowish white, forming a double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, fringed with paler brown, the innermost secondaries edged with yellowish white at the ends; tail-feathers brown, margined with ochreous brown; crown of head like the back; lores and feathers round eye ochreous white; ear-coverts and sides of neck pale ochreous brown; cheeks and under surface of body ochreous buff, paler and more isabelline on the centre of the breast and abdomen; sides of body, flanks, thighs, and under tail-coverts pale ochreous buff, as well as the under wing-coverts and axillaries; quills below dusky, ashy along the inner web, and ashy white towards the base of the latter. Total length 4·15 inches, culmen 0·35, wing 2·1, tail 1·7, tarsus 0·55.

Hab. From Texas to Mexico.

a. ♀ ad. sk.	Lomita Ranch, Texas, April 11, 1878.	G. B. Sennett, Esq. [C.].
b. ♂ imm. st.	Mexico.	Purchased.
c. ♂ imm. sk.	Mexico.	("Type of *S. mexicana*, Sw.")
d, *e*. ♂ ♀ imm. sk.	Cordova.	M. A. Sallé [C.].
f. ♂ ad. sk.	Jalapa, S. Mexico (*de Oca*).	Salvin-Godman Coll.
g, *h*. ♂ ad. et juv. sk.	Orizaba, Mexico (*Botteri*).	Sclater Coll

29. Spermophila cærulescens.

Pico grueso gargantilla, *Azara, Apunt.* i. p. 452 (1802).
Pyrrhula cærulescens, *Bonn. et Vieill. Enc. Méth.* iii. p. 1023 (1823).
Pyrrhula nigricollis, *iid. t. c.* p. 1027 (1823).
Fringilla ornata, *Licht. Verz. Doubl.* p. 26 (1823).
Fringilla leucopogon, *Neuwied, Beitr. Naturg. Bras.* iii. p. 572 (1830).
Pyrrhula ornata, *D'Orb. & Lafr. Syn. Av. in Mag. de Zool.* 1837, p. 86.
Spermophila nigrogularis, *Gould in Darwin's Voy. Beagle, Birds,* p. 88 (1841); *Gray, Gen. B.* ii. p. 386 (1844).
Spermophila cærulescens, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 498 (1850); *Scl. Cat. Amer. B.* p. 104 (1862); *id. Ibis,* 1871, p. 12; *Hamilton, t. c.* p. 303; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *iid. P. Z. S.* 1879, p. 684; *White, Ibis,* 1882, p. 598.
Spermophila nigricollis, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 498 (1850); *Scl. Cat. Amer. B.* p. 104 (1862).
Spermophila ornata, *Hartl. Ind. Azara,* p. 9 (1847); *Bp. Consp.* i. p. 497 (1850); *Scl. & Salv. P. Z. S.* 1869, p. 632; *Pelz. Orn. Bras.* pp. 224, 438 (1871).
Sporophila ornata, *Cab. Mus. Hein.* Th. i. p. 149 (1850); *Burm. Th. Bras.* iii. p. 243 (1856); *id. Reis. La Plata-St.* ii. p. 488 (1861).
Gyrinorhynchus cærulescens, *Gray, Hand-l. B.* ii. p. 195, no. 7575 (1870).

Adult male. General colour above dark ashy grey, with obsolete dusky centres to the dorsal feathers; lesser wing-coverts like the back; median and greater coverts and bastard-wing dusky blackish, edged with ashy grey; primary-coverts and quills browner, edged with ashy; upper tail-coverts a little browner than the back; tail-feathers brown, margined with ashy; crown of head ashy grey, rather darker than the head; forehead blackish, this shade overspreading the crown almost to the occiput; eyelid white above and below; lores, feathers below the eye, and ear-coverts black, the latter washed with ashy posteriorly; cheeks and throat white, with a black patch on the chin and upper throat; rest of under surface white, with a black band across the fore neck; sides of upper breast mottled with black centres to the feathers; sides of body and flanks washed with ashy grey, the latter mottled with dark ashy-grey bases to the feathers; thighs and under tail-coverts white; under wing-coverts and axillaries white, with a dusky patch near the edge of the wing; quills below dusky, ashy along the edge of the inner web: "bill yellow; feet flesh-colour; iris greyish brown" (*Neuwied*). Total length 4·3 inches, culmen 0·35, wing 2·25, tail 1·85, tarsus 0·55.

The *male in seasonal plumage* is washed with olive-brown on the back, wings, and tail, and the head and ear-coverts are ashy grey, the black being visible only on the base of the forehead, lores, and fore part of the ear-coverts. It is evident that in the full plumage the ashy-grey colour becomes abraded and the black spreads over the crown. The black spot on the throat and the band on the fore neck are both overshaded with grey.

The two specimens from Simacu in the Salvin-Godman collection appear to me to belong to a different species, not having any black whatever on the forehead or lores; but as they are in seasonal

plumage, and the feathers of the head are rather damaged, I prefer to wait for more perfect specimens before deciding on the distinctness of the Bolivian bird.

Young males are brown like the old females, but are rather more ashy, and have the breast and abdomen whiter, being in this respect like the adult male. The chin has a blackish spot, strongly obscured by ashy margins to the feathers, followed by a large white throat-spot, and below this there are indications of a band on the fore neck, obscured by ashy grey. There is no trace of black on the forehead or lores, and the white streak on the cheeks is obscured by ashy tips to the feathers.

Adult female. Different from the male. General colour above olive-brown; wing-coverts, quills, and tail-feathers dusky-brown, edged with olive-brown like the back; crown of head, lores, and sides of face like the back; eyelid and feathers below the eye dull whitish; cheeks and under surface of body ochreous brown, washed with olive-yellow, the throat whiter in the centre; sides of body and flanks somewhat browner, the abdomen yellowish white; thighs brown; under tail-coverts ochreous white; under wing-coverts and axillaries olive-yellowish, the former white at the base; quills below dusky, ashy along the inner edge. Total length 4·5 inches, culmen 0·4, wing 2·05, tail 1·6, tarsus 0·55.

Hab. Southern Brazil, Paraguay, Argentine Republic, and Bolivia.

a. ♂ ad. sk.	Brazil.	Lord Stuart de Rothesay [P.].
b, *c*. ♂ ad. sk.	Brazil.	J. Gould, Esq.
d, *e*. ♂ ad. sk.	Brazil.	Sclater Coll.
f. ♂ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Bahia.	Sclater Coll.
h. ♀ ad. sk.	Rio de Janeiro.	Sclater Coll.
i. ♀ ad. sk.	Rio de Janiero (*J. Natterer*).	Sclater Coll.
k. ♂ ad. sk.	Rio de Janeiro, Dec. 8, 1817 (*J. Natterer*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Rio de Janeiro, April 18, 1875.	H. Durnford, Esq. [C.].
m. ♀ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
n, *o*. ♂ ♀ ad. sk.	Monte Video (*C. Darwin*).	Zoological Society. (Types of *S. nigrogularis*, Gould.)
p, *q*. ♂ ad. sk.	Conchitas, Buenos Ayres (*W. H. Hudson*).	Sclater Coll.
r. ♂ ad. sk.	Conchitas, Oct. 1868 (*W. H. H.*).	Salvin-Godman Coll.
s. ♂ jun. sk.	Barracas, near Buenos Ayres, Dec. 27, 1875.	H. Durnford, Esq. [C.].
t. ♀ ad. sk.	Flores, Buenos Ayres, Nov. 26, 1881 (*E. W. White*).	Sclater Coll.
u, *v*. ♂ ♀ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
w, *x*. ♂ ♀ ad. sk.	Mendoza, Feb. 1871 (*Weisshaupt*).	Salvin-Godman Coll.
y, *z*. ♂ ♀ ad. sk.	Mendoza.	Mr. Weisshaupt [C.].
a', *b'*. ♂ ad. sk.	Simacu, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

30. Spermophila gutturalis.

? Black and Yellow Frizzled Sparrow, *Edwards, Gleanings,* ii. p. 128, pl. 271. fig. 1 (1760).
? Fringilla crispa, *Linn. Syst. Nat.* i. p. 324 (1766, *ex Edwards*).
? Loxia crispa, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 253 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 253.
Fringilla gutturalis, *Licht. Verz. Doubl.* p. 26 (1823).
Loxia ignobilis, *Spix, Av. Bras.* p. 46, pl. 60. fig. 3 (1824).
Loxia plebeja, *Spix, t. c.* p. 46, pl. 59. fig. 3 (1824).
Fringilla melanocephala, *Neuwied, Beitr. Naturg. Bras.* iii. p. 577 (1830).
Spermophila olivaceoflava, *Lafr. Rev. Zool.* 1843, p. 291, 1846, p. 207.
Spermophila gutturalis, *Gray, Gen. B.* ii. p. 386 (1844); *Scl. P. Z. S.* 1855, p. 160, 1860, p. 293; *id. Cat. Amer. B.* p. 105 (1862); *Scl. & Salv. P. Z. S.* 1864, p. 352, 1867, p. 572; *Pelz. Orn. Bras.* pp. 225, 438 (1871); *Scl. Ibis,* 1871, p. 15; *Wyatt, t. c.* p. 328; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Layard, Ibis,* 1873, p. 380; *Tacz. P. Z. S.* 1874, p. 519; *Scl. & Salv. P. Z. S.* 1876, p. 16; *iid. P. Z. S.* 1879, p. 507; *Tacz. t. c.* p. 229; *id. P. Z. S.* 1880, p. 199; *Forbes, Ibis,* 1881, p. 336; *Salv. Ibis,* 1885, p. 215; *id. & Godman, Biol. Centr.-Amer., Aves,* i. p. 354 (1885); *Tacz. Orn. Pérou,* iii. p. 13 (1886).
Spermophila plebeia, *Gray, Gen. B.* ii. p. 386 (1844).
Spermophila ignobilis, *Gray, Gen. B.* ii. p. 386 (1844).
Phonipara gutturalis, *Bp. Consp.* i. p. 494 (1850); *Lawr. Ann. Lyc. N. Y.* vii. p. 298 (1861).
Sporophila gutturalis, *Cab. Mus. Hein.* Th. i. p. 149 (1850); *Burm. Th. Bras.* iii. p. 244 (1856).
Passerina gutturalis, *Gray, Hand-l. B.* ii. p. 98, no. 7454 (1870).
Spermophila gutturalis olivacea, *Berlepsch & Tacz. P. Z. S.* 1883, p. 537, 1884, p. 293.
Spermophila gutturalis pallida, *Berlepsch, J. f. O.* 1884, p. 294.

Adult male. General colour above dull olive-greenish, blackish towards the mantle and head; lesser wing-coverts like the back; median and greater coverts dusky blackish, edged with olive-green; bastard-wing, primary-coverts, and quills dusky blackish, fringed with olive-green, broader on the secondaries; a small alar speculum of yellowish white, formed by the white bases to the outer webs of the inner primaries; upper tail-coverts like the back; tail-feathers dusky brown, edged with olive-greenish; crown of head dull black, as also the entire sides of face, ear-coverts, cheeks, throat, sides of neck, and fore neck; breast and abdomen pale sulphur-yellow; sides of body and flanks pale sulphur-yellow, mottled with blackish bases; thighs yellow, black posteriorly; under tail-coverts pale yellow; under wing-coverts and axillaries white, washed with yellow, dusky blackish near the edge of the wing; quills below dusky, ashy along the inner edge, whitish towards the base: "bill blackish: legs dark brownish grey; iris clear greyish brown" (*Neuwied*). Total length 4·5 inches, culmen 0·4, wing 2·1, tail 1·6, tarsus 0·55.

In *seasonal plumage* the male is much more olive-green than in its full plumage, and the head is like the back, the black showing only on the forehead, and being overshaded with olive-green on the

sides of the face. This is the stage of plumage described by Count von Berlepsch as a distinct species, *S. olivacea*, supposed to inhabit Ecuador. Similar birds are, however, found in other countries, and the one described above is from Pernambuco. Ecuador skins are certainly brighter in colour below, and the female is more saffron-yellow underneath; the wing-spot, always small, is also obsolete in specimens from Ecuador, but it is such an inconstant character that every intermediate grade is found in the Museum series.

Adult female. Different from the male. General colour above olive-brown; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with olive-brown, and tipped with whity brown, forming an indistinct double bar; bastard-wing, primary-coverts, and quills dusky brown, edged with olive-brown, broader on the secondaries; tail-feathers dusky brown, margined with olive-brown; crown of head and sides of head like the back; lores and feathers round eye buffy white; ear-coverts olive-brown streaked with whitish; cheeks and under surface of body ochreous buff; breast and abdomen buffy white with a yellow tinge; sides of body and flanks olive-brown; thighs and under tail-coverts whitish tinged with ochre; under wing-coverts and axillaries white, washed with ochreous yellow; quills below dusky, ashy along the inner edge, whitish towards the base. Total length 4·1 inches, culmen 0·35, wing 2, tail 1·6, tarsus 0·55.

Young males at first resemble the adult female, but show a good deal of black on the throat and crown, all, however, concealed by the overlying greenish plumage.

Hab. Brazil, Guiana, Venezuela, Colombia, extending into Panama; Ecuador and Peru.

a. ♂ ad. sk.	S. America (*C. Darwin*).	Zoological Society.
b. ♂ ad. st.	Brazil.	Zoological Society.
c. ♂ ad. sk.	Brazil.	J. Gould, Esq.
d, e. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Coll.
g. ♂ ad. sk.	Bahia.	Sclater Coll.
h. ♂ ad.; *i.* ♂ juv. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
k, l. ♂ ad. sk.	Para (*A. R. Wallace*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Para.	Sclater Coll.
n. ♂ ad. sk.	Roraima, Jan. 3, 1882 (*H. Whitely*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Roraima, June 22, 1883 (*H. W.*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Trinidad.	Zoological Society.
q. ♂ ad. sk.	Bogotá.	Sclater Coll.
r. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.
s. ♂ ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Lion Hill Station, Panama (*McLeannan*).	Salvin-Godman Coll.
u, v. ♂; *w.* ♀ ad. sk.	Quito, Ecuador.	J. Gould, Esq.
x. ♂ ad. sk.	Ecuador.	Salvin-Godman Col
y. ♂ ad. sk.	Nanegal, Ecuador, Feb. (*L. Fraser*).	Sclater Coll.

z. ♂ juv. sk.	Puellaro, March (*L. Fraser*).	Sclater Coll.
a'. ♂ ad. sk.	Esmeraldas, Nov. (*L. F.*).	Sclater Coll.
b'. ♂ ad. sk.	Cayandeled, Ecuador, April 13 (*J. Stolzmann*).	Sclater Coll.
d'. ♂ ♀ ad. sk.	Tambillo, Peru, Sept. (*J. Stolzmann*).	Sclater Coll.

31. Spermophila ocellata.

Spermophila ocellata, *Scl. & Salv. P. Z. S.* 1866, p. 181; *Scl. Ibis*, 1871, p. 14, pl. ii. fig. 3; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *iid. P. Z. S.* 1873, p. 264; *Tacz. & Berlepsch, P. Z. S.* 1885, p. 84; *Tacz. Orn. Pérou*, iii. p. 15 (1886).

Adult male (type of species). General colour above glossy greenish black; a white band across the rump; wing-coverts like the back; bastard-wing, primary-coverts, and quills black, edged with greenish black, the inner primaries and inner secondaries white at the base of the outer web, forming a double speculum, the inner one being concealed by the greater coverts; upper tail-coverts and tail-feathers black, edged with glossy greenish black; crown of head like the back, with a few white spots forming a streak in the centre of the forehead; lores, feathers below the eye, and ear-coverts glossy black like the crown; the cheeks white, forming a broad stripe; throat and sides of neck glossy black; fore neck mottled, the feathers being black at the base, with a round white spot at the tip; breast and abdomen white; sides of body and flanks white, slightly mottled with black bases to the feathers; thighs black externally, white internally; under tail-coverts white; under wing-coverts and axillaries white; edge of wing mottled with black; quills below blackish, edged with ashy, and white at the base: "bill black; feet dull black; iris dark brown" (*A. Goering*). Total length 4·2 inches, culmen 0·35, wing 2·1, tail 1·65, tarsus 0·55.

The white streak in the centre of the forehead is not a positive character in this species. In some of the Nauta specimens there are a few traces of white, but in two individuals it is altogether absent.

Adult female. Different from the male. General colour above dull olive-brown, a little lighter on the rump and upper tail-coverts; wing-coverts like the back, the median and greater coverts with paler ends, forming an obsolete double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with pale olive-brown, broader on the inner secondaries; tail-feathers dusky brown, edged with olive-brown; crown of head like the back; lores and feathers round eye ochreous buff; ear-coverts paler olive-brown than the head; cheeks, throat, and fore neck pale ochreous buff; breast and abdomen buffy white; sides of body, flanks, thighs, and under tail-coverts ochreous buff; under wing-coverts and axillaries buff, with an olive-yellow tinge; quills below dusky, ashy along the inner edge, whitish towards the base: "iris dark brown" (*A. Goering*). Total length 4·5 inches, culmen 0·3, wing 2·1, tail 1·7, tarsus 0·55.

Hab. Upper Amazonia, Guiana, Venezuela, and Colombia.

a. ♂ juv. sk.	Santa Marta, U.S. Colombia, April 5, 1879 (*F. Simons*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Valencia, Venezuela (*A. Goering*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Valencia (*A. Goering*).	Sclater Coll.
d. ♀ ad. sk.	Merida, Venezula (*A. Goering*).	Sclater Coll.
e. ♀ ad. sk.	Merida (*A. Goering*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Carimang River, British Guiana, June 19, 1885 (*H. Whitely*).	Salvin-Godman Coll.
g. ♂ ad. sk.	River Ucayali.	J. Hauxwell, Esq. [C.].
h. ♂ ad. sk.	Yquitos, E. Peru, May 21, 1878 (*H. Whitely*).	Sclater Coll.
i, k. ♂ ♀ ad. sk.	Nauta, Peruvian Amazons (*E. Bartlett*).	Sclater Coll. (Types of species.)
l. ♂ ad. sk.	Nauta, May 13, 1865 (*E. B.*).	Salvin-Godman Coll.
m, n. ♂ ad. sk.	Nauta.	E. Bartlett, Esq. [C.].
o. ♂ ad. sk.	Nauta, April 1865.	E. Bartlett, Esq. [C.].
p. ♀ ad. sk.	Nauta, Jan. 1866.	E. Bartlett, Esq. [C.].

32. Spermophila lineola.

Loxia lineola, *Linn. Syst. Nat.* i. p. 304 (1766).
Loxia crispa, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 154 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 253.
Pyrrhula crispa, *Vieill. Ois. Chant.* p. 76, pl. 47 (1805).
Pyrrhula bouvronoides, *Less. Traité*, p. 450 (1831).
? Pyrrhula lineola, *D'Orb. & Lafr. Syn. Av. in Mag. de Zool.* 1837, p. 86.
Spermophila lineola, *Gray, Gen. B.* ii. p. 386 (1844); *Bp. Consp.* i. p. 497 (1850); *Scl. Cat. Amer. B.* p. 104; *Scl. & Salv. P. Z. S.* 1866, p. 181, 1867, p. 595, 1869, p. 252; *Finsch, P. Z. S.* 1870, p. 583; *Pelz. Orn. Bras.* pp. 224, 438; *Scl. Ibis*, 1871, p. 13; *id. & Salv. P. Z. S.* 1879, p. 604; *Salv. Ibis*, 1885, p. 214.
Spermophila bouvronoides, *Bp. Consp.* i. p. 497 (1850); *Scl. Cat. Amer. B.* p. 104 (1862).
Sporophila lineola, *Cab. Mus. Hein.* Th. i. p. 150 (1850); *Burm. Th. Bras.* iii. p. 248 (1856).
Spermophila lineata (lapsu), *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873).

Adult male. General colour above glossy greenish black, with a band of white feathers across the rump, which is also a little mixed with grey; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills blackish, edged with glossy greenish black, the inner primaries white at the base of the outer web, forming a speculum, the secondaries also with a similar white speculum concealed by the greater coverts; upper tail-coverts greenish black; tail-feathers black; crown of head like the back, with a broad longitudinal band of white reaching far on to the crown from the base of the bill; feathers round eye and upper part of ear-coverts black; the cheeks and lower ear-coverts white,

forming a broad band; throat black, connected with the sides of the neck and separating the cheek-band from the rest of the under surface, which is pure white; the sides of body and flanks washed with ashy grey; thighs black, white internally; under tail-coverts white; under wing-coverts and axillaries white, with a black spot near the edge of the wing; quills below blackish, white at the base of the inner web. Total length 4·4 inches, culmen 0·3, wing 2·2, tail 1·85, tarsus 0·55.

Adult female. Different from the male. General colour above olive-brown; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with olive-brown; bastard-wing, primary-coverts, and quills dusky brown, fringed with olive-brown, more broadly on the secondaries; upper tail-coverts a little lighter olive-brown than the back; tail-feathers brown, margined with olive-brown; crown of head like the back; lores and eyelid ochreous buff; ear-coverts paler olive-brown than the head; cheeks and throat pale ochreous buff, browner towards the fore neck; breast and abdomen buffy white with an ochreous tinge; sides of body and flanks olive-brown; thighs ochreous brown; under tail-coverts like the abdomen; under wing-coverts and axillaries dull white, washed with yellow; quills below dusky brown, edged with ashy, whitish towards the base: "bill horn-black; feet fleshy brown; iris greyish brown" (*Burmeister*). Total length 4 inches, culmen 0·3, wing 2·1, tail 1·6, tarsus 0·55.

Young males at first resemble the old females, but are generally more fulvous below, and may be detected by a little black on the wings and tail-feathers, or under the throat-feathers, which form a dusky patch, followed by a whitish patch on the lower throat.

Although competent authorities assert that specimens from Brazil are absolutely identical with others from Trinidad, from an examination of the fine series of specimens in the British Museum I have arrived at a different conclusion, viz., that there are three well-defined races, perhaps good species, confused under the heading of *S. lineola*. The typical form with the white streak on the crown is found in Brazil (Bahia), and extends to Guiana and Venezuela. In Trinidad it is represented by a race which I call *S. trinitatis* (fully expecting that a larger series will confirm my determination), which has the white streak on the head represented by a few white spots only. The Amazonian form, which I call *S. amazonica*, has *no* white streak and *no* white spots on the forehead.

A male of *S. amazonica* measures:—Total length 3·9 inches, culmen 0·35, wing 2·25, tail 1·65, tarsus 0·55.

The female of *S. amazonica* is much browner than the female of typical *S. lineola*, without the olive shade of that species, and is decidedly browner below. Total length 4 inches, culmen 0·35, wing 1·95, tail 1·6, tarsus 0·55.

Hab. Brazil, Amazonia, Guiana, and Venezuela.

α. Spermophila lineola.

a. ♂ ad. st.	South America.	Purchased.
b. ♂ ad. st.	Bahia.	Sudbury Museum.
c, d. ♂ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
e, f. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Cayenne.	Sclater Coll.
h. ♂ ad. sk.	British Guiana (*Schomburgk*).	Zoological Society.
i. ♂ imm. sk.	Merumé Mountains, British Guiana, June 13, 1881 (*H. Whitely*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad. sk.	Camacusa, July 10, 1882 (*H. W.*).	Salvin-Godman Coll.
m. ♂ juv. sk.	Camacusa, Juue 22, 1882 (*H. W.*).	Salvin-Godman Coll.
n, o. ♂ ad. et juv. sk.	Carimang River, July 13, 1885 (*H. W.*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Lake of Valencia, Venezuela (*A. Goering*).	Sclater Coll.

β. Spermophila trinitatis.

q. ♂ ad. sk.	Trinidad.	Sclater Coll.
r. ♂ ad. sk.	S. Vincent (*Guilding*).	Gould Coll.
s. ♂ ad. sk.	S. America.	Sclater Coll.

γ. Spermophila amazonica.

t. ♂ ad. sk.	North side of River Amazon (*A. R. Wallace*).	Sclater Coll.
u. ♀ ad. sk.	Island of Mexiana (*A. R. Wallace*).	Sclater Coll.
v. ♀ ad. sk.	River Amazon (*A. R. W.*).	Salvin-Godman Coll.
w. ♀ ad. sk.	River Tocantins, Sept. 1848 (*A. R. W.*).	Salvin-Godman Coll.

33. Spermophila aurita.

Spermophila aurita, *Bp. Consp.* i. p. 497 (1850); *Lawr. Ann. Lyc. N. Y.* vii. p. 333 (1861); *Frantz. J. f. O.* 1869, i. p. 301; *Scl. Ibis*, 1871, p. 14, pl. ii. figs. 1, 2; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 354 (1885).

Spermophila lineata (*nec Gm.*), *Lawr. Ann. Lyc. N. Y.* vii. p. 474 (1861).

Spermophila hoffmanni, *Cab. J. f. O.* 1861, p. 6.

Spermophila semicollaris, *Lawr. Ann. Lyc. N. Y.* viii. p. 10 (1863); *Scl. & Salv. P. Z. S.* 1864, p. 352; *Salv. P. Z. S.* 1867, p. 141, 1870, p. 189.

Spermophila hicksi, *Lawr. Ann. Lyc. N. Y.* viii. p. 170 (1865).

Spermophila fortipes, *Lawr. t. c.* p. 171 (1865).

Spermophila collaris, *Lawr. t. c.* p. 177 (1865).

Adult male. General colour above glossy greenish black, th thers of the rump tipped with white, forming an irregular

across; wing-coverts like the back; quills black, the inner primaries white at the base of the outer web, forming an alar speculum; upper tail-coverts and tail-feathers black; crown of head, lores, sides of face, ear-coverts, cheeks, throat, fore neck, and chest black; sides of neck with a white crescentic patch; breast and abdomen white; sides of body and flanks black, tipped with white; thighs black, internally white; under tail-coverts white, the longer ones with black bases; under wing-coverts and axillaries white, with a black patch near the edge of the wing; quills below black, edged with ashy, white towards the base of the inner web. Total length 4·1 inches, culmen 0·4, wing 2·15, tail 1·75, tarsus 0·55.

In some males the white spot on each side of the neck is connected by a white band across the lower throat, and the base of the chin is white; the lower back and rump are also white, forming a broad band. Between this and the form described there is every intermediate link in the Salvin-Godman collection—as, for instance, a male with a white throat-band and the rump black; another with the rump white and the entire throat black, with scarcely any sign of the white neck-patch; another with a white band on the throat, the neck-patch obsolete, and the rump marked by a few white-tipped feathers. How these variations have been brought about, whether by hybridization or not, it is impossible to determine; but I quite agree with Messrs. Salvin and Godman that only one species can be recognized.

In the *seasonal plumage* the whole of the upper surface is brown, with which colour the feathers are broadly tipped; the white rump is overshaded with ochreous buff, and the white tips to the wing-coverts and inner secondaries are also tinged with ochreous buff; the white on the sides of the neck and the whole of the breast and abdomen are entirely obscured by brownish ochre, and the black band on the chest is shaded over with ochreous tips to the feathers. With the shedding of the ochreous tips to the feathers, the buff tinge on the white parts disappears, and these parts gradually become pure white.

Adult female. Different from the male. General colour above olive-brown; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills dull brown, edged with olive; upper tail-coverts like the back; tail-feathers brown, edged with olive; crown of head like the back; lores pale olive, as also the feathers round and below the eye; ear-coverts pale brown washed with olive; cheeks and under surface of body pale olive-buff, lighter on the abdomen, which is yellowish white; sides of body and flanks olive-brown; thighs and under tail-coverts olive-buff; under wing-coverts and axillaries dull whitish, washed with olive-yellow; quills below dusky, edged with ashy along the inner web. Total length 3·7 inches, culmen 0·45, wing 2, tail 1·65, tarsus 0·55.

Hab. Central America, from Guatemala and Costa Rica to Panama.

a. ♂ ad. sk.	Panama (*Chambers*).	Sclater Coll.
b. ♂ ad. sk.	Panama (*J. McLeannan*).	Sclater Coll.
c. ♂; *d, e.* ♀ ad. sk.	Lion Hill Station, Panama (*J. McLeannan*).	Salvin-Godman Coll.
f, g. ♂; *h.* ♀ ad. sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Santa Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Calovevora, Veragua (*E. Arcé*).	Salvin-Godman Coll.
l. ♂ juv. sk.	Mina Chorcha, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
m, n. ♂ ♀ ad. sk.	Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Bugaba, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Chitra, Veragua (*E. Arce*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Panama.	Capt. Kellett and Lieut. Wood [P.]
r. ♂ imm. sk.	Dueñas, Guatemala (*O. Salvin*).	Sclater Coll.
s. ♂ ad. sk.	Dueñas (*O. S. & F. D. G.*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Retalhuleu, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.
u. ♂ imm. sk.	Totanicapam, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.

34. Spermophila luctuosa.

Spermophila luctuosa, *Lafr. Rev. Zool.* 1843, p. 291; *Gray, Gen. B* ii. p. 386 (1844); *Bp. Consp.* i. p. 497 (1850); *Scl. P. Z. S.* 1855, p. 160, 1858, pp. 72, 455; *id. Cat. Amer. B.* p. 105 (1862); *id. & Salv. P. Z. S.* 1867, p. 750, 1869, p. 597; *Pelz. Orn. Bras.* p. 224, note; *Scl. Ibis*, 1871, p. 15; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *iid. P. Z. S.* 1873, p. 264; *Tacz. P. Z. S.* 1874, p. 519; *Scl. & Salv. P. Z. S.* 1879, pp. 507, 605; *Salvin & Godm. Ibis*, 1880, p. 14; *Tacz. P. Z. S.* 1882, p. 17; *id. & Berlepsch, P. Z. S.* 1884, p. 293; *iid. P. Z. S.* 1885, p. 84; *Tacz. Orn. Pérou*, iii. p. 10 (1886).

Sporophila luctuosa, *Cab. in Wiegm. Arch.* 1844, p. 291; *Tschudi & Cab. Faun. Peruan.* p. 221 (1845–46); *Cab. Mus. Hein.* Th. i. p. 150 (1850).

Adult male. General colour above entirely black; wing-coverts, bastard-wing, primary-coverts, and quills like the back, the inner primaries white at the base of the outer web, forming a large alar speculum; upper tail-coverts and tail-feathers black; crown of head, sides of face, ear-coverts, cheeks, throat, sides of neck, fore neck, and chest black; breast and abdomen white; sides of body and flanks black, the latter slightly varied with white tips to the feathers; thighs black, white posteriorly; under tail-coverts white, the long ones with black bases; under wing-coverts and axillaries black, the edge of the wing black, with a black patch on the lower coverts; quills below black, edged with ashy, the base of the inner web conspicuously white; "bill ashy whitish, the lower mandible more or less lead-colour; feet greyish lead-colour; iris dark brown" (*Jelski*). Total length 4·7 inches, culmen 0·35, wing 2·1, tail 1·6, tarsus 0·65.

Adult female. Different from the male. General colour above olive-brown, a little clearer brown towards the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with olive-brown, the ends of the greater coverts whity brown; tail-feathers brown, edged with olive-brown; crown of head like the back; lores and feathers round eye ochreous buff; ear-coverts light brown, with paler shaft-streaks; cheeks, throat, and breast ochreous brown, shaded with olive; abdomen white, washed with olive-yellow; sides of body and flanks brown with an olive tinge; thighs and under tail-coverts ochreous buff; under wing-coverts and axillaries whitish, washed with olive-yellow: quills below dusky, ashy along the inner web, which is whitish towards the base: "bill pale brown, the lower mandible as in the male; feet and iris as in the male" (*Jelski*). Total length 4·4 inches, culmen 0·35, wing 2·05, tail 1·75, tarsus 0·6.

Young male. At first brown, like the old female, with the black of the throat concealed, and to all appearance not half so extended as in the old male, the black appearance confined to the throat; but on lifting the feathers the black plumage will be found more or less developed on the fore neck.

In *seasonal plumage* the male is dull olive-brown instead of black, the black plumage being obscured by olive-brown tips to the feathers, which are shed when the full plumage is assumed. The abdomen and under tail-coverts are white, as in the adult bird, but the sides of the body are brown.

Hab. From Colombia to Ecuador, Peru, and Bolivia.

a. ♂ ad. st.	Colombia.	Purchased
b, c. ♂ ad. sk.	Bogotá.	Purchased.
d, e. ♂ ♀ ad. sk.	Bogotá.	Sclater Coll.
f. ♀ ad. sk.	Bogotá.	Salvin-Godman Coll.
g. ♂ ad. sk.	Bogotá (*G. Crowther*).	Salvin-Godman Coll.
h, i. ♂ ♀ ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad. sk.	San Sebastian, U. S. Colombia, July 29, 1879 (*F. A. Simons*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Ecuador.	Gould Coll.
n. ♀ ad. sk.	Ecuador (*L. Fraser*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Intac, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Cosnipata, Peru, Oct. 31, 1868 (*H. Whitely*).	Sclater Coll.
r. ♂ ad. sk.	Cosnipata, Oct. 1, 1868.	H. Whitely, Esq. [C.].
s. ♀ ad. sk.	Cosnipata, Sept. 17, 1868.	H. Whitely, Esq. [C.].
t. ♂ juv.; *u.* ♀ ad. sk.	Xeberos, Peruvian Amazons, Oct. 1866.	E. Bartlett, Esq. [C.].
v. ♂ juv. sk.	Simacu, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
w. ♀ ad. st.	S. America.	Zoological Society.

35. Spermophila corvina.

Spermophila corvina, *Scl. P. Z. S.* 1859, p. 379; *id. & Salv. Ibis*, 1860, p. 33; *Scl. Cat. Amer. B.* p. 105 (1862); *Lawr. Ann. Lyc. N. Y.* viii. p. 179 (1865); *Scl. & Salv. P. Z. S.* 1867, p. 278; *Lawr. Ann. Lyc. N. Y.* ix. p. 102 (1868); *Frantz. J. f. O.* 1869, p. 301; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869); *Scl. & Salv. P. Z. S.* 1870, p. 836; *Scl. Ibis*, 1871, p. 16; *Salv. Ibis*, 1872, p. 317; *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Nutting & Ridgw. Pr. U.S. Nat. Mus.* vi. p. 401 (1884); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 355 (1885).

Sporophila corvina, *Cass. Proc. Philad. Acad.* 1865, p. 169.

Spermophila badiiventris, *Lawr. Ann. Lyc. N. Y.* viii. p. 171 (1865); *Baird, Trans. Chicago Acad.* i. p. 319, pl. 28. fig. 3 (1869).

Adult male (type of species). Entirely black, both above and below; inner primaries white at the base of the outer web, forming a speculum; under wing-coverts and axillaries white, the coverts along the edge of the wing black; quills blackish below, ashy along the edge of the inner web, and white towards the base of the latter. Total length 4·5 inches, culmen 0·35, wing 2·2, tail 1·8, tarsus 0·65.

The males from all localities, except the Mexican bird described above, have a few white-edged feathers on the centre of the breast, forming a linear streak.

Adult female. Different from the male. General colour above dark olive-brown; lesser wing-coverts like the back: median and greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with the same colour as the back; upper tail-coverts like the back; tail-feathers brown, edged with olive; crown of head and sides of neck like the back; lores and feathers round eye fulvous; ear-coverts, cheeks, and under surface of body olive-brown, a little paler on the abdomen, thighs, and under tail-coverts; under wing-coverts and axillaries white, washed with olive-yellow; quills below dusky, ashy white along the edge of the inner web. Total length 4·4 inches, culmen 0·4, wing 2·1, tail 1·75, tarsus 0·6.

The young male is at first brown like the adult female, and gradually assumes the black plumage by a complete moult.

Hab. Central America, from Mexico to Costa Rica.

a. ♂ ad. sk.	Oaxaca, Mexico, April 1859 (*A. Boucard*).	Sclater Coll. (Type of species.)
b, c. ♂ ♀ ad. sk.	Vera Paz, Guatemala.	O. Salvin, Esq. [C.]
d, e. ♂ ad.; *f.* ♀ ad. sk.	Choctum, Vera Paz, Feb. 1862 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Honduras.	Sclater Coll.
h. ♂ jun. sk.	Honduras (*G. Whitely*).	Sclater Coll.
i. ♂ ad. sk.	Chontales, Nicaragua (*J. Belt*).	Sclater Coll.
k, l. ♂ ad. sk.	Chontales, Nicaragua (*J. Belt*).	Salvin-Godman Coll.
m, n. ♂ ♀ ad. sk.	Costa Rica (*J. Carmiol*).	Sclater Coll.
o. ♂ ad. sk.	Pacuare, Costa Rica, Apr. 5, 1867 (*J. Carmiol*; Sm. no. 47425).	Salvin-Godman Coll.
p. ♀ ad. sk.	Angostura, Costa Rica, Jan. 11, 1867 (*J. Carmiol*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Turrialba, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Turrialba, Costa Rica (*E. Arcé*).	Sclater Coll.

36. Spermophila bicolor.

Pyrrhula bicolor, *D'Orb. & Lafr. Syn. Av. in Mag. de Zool.* 1837, p. 86 (*nec Gosse*, 1847); *D'Orb. Voy. Amér. Mérid., Ois.* pl. 50. fig. 1 (1835-44).
Spermophila bicolor, *Gray, Gen. B.* ii. p. 386 (1844); *Scl. Cat. Amer. B.* p. 103 (1862); *id. Ibis*, 1871, p. 17; *id. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *iid. P. Z. S.* 1879, p. 605.
Sporophila bicolor, *Bp. Consp.* i. p. 499 (1850).

Adult male. General colour above black, with a white band across the rump: wing-coverts black, the median and greater coverts with small white spots at the ends, larger on the ends of the inner coverts forming a white patch; bastard-wing, primary-coverts, and quills black, the bases of the inner primaries and inner secondaries white externally, forming a double alar speculum; upper tail-coverts and tail-feathers black, with a tiny spot of white at the end of the latter; crown of head, sides of face, and ear-coverts black; cheeks and under surface of body white, the sides of the upper breast mottled with black bases to the feathers: under wing-coverts and axillaries white, with a black patch near the edge of the wing; quills below black, edged with ashy, and white at the base of the inner webs. Total length 5·5 inches, culmen 0·45, wing 3·45, tail 2·1, tarsus 0·65.

Hab. Bolivia.

a, b. ♂ ad. sk.	Bolivia.	Sclater Coll.

Addendum to the Genus *Spermophila*.

There are still several species of *Spermophila* which I cannot determine, most of them being also left undetermined by Dr. Sclater when he monographed the genus in 1871.

Spermophila caboclinho.

Spermophila caboclinho, *Pelz. Orn. Bras.* pp. 224, 331 (1871, *ex Natt. MSS.*); *Sclater, Ibis*, 1871, p. 19.

Young male and female. Similar in colour to the female of *S. ornata* (i. e. *S. cœrulescens*), but with the base of the quills broadly white and the wing-coverts black, edged with the colour of the back. Total length $4\frac{1}{2}''$, wing $2''$, tail $1''$ $9'''$, bill from gape $4'''$, tarsus $6'''$. (*Pelzeln.*)

Hab. Rio Janeiro.

Spermophila cinnamomea.

Pyrrhula cinnamomea, *Lafr. Rev. Zool.* 1839, p. 99.
Spermophila cinnamomea, *Gray, Gen. B.* ii. p. 386 (1844); *Pelz. Orn. Bras.* pp. 226, 438 (1871); *Scl. Ibis*, 1871, p. 20.
Sporophila cinnamomea, *Cab. Mus. Hein.* Th. i. p. 150, note (1850).

Similar to *S. minuta*, but entirely brownish cinnamon, with the head grey; quills and tail-feathers blackish, margined with grey; a white wing-spot. (*Bonaparte.*)

Hab. Brazil.

I should have thought that this species would be identical with *S. hypoxantha*, but Von Pelzeln keeps the two distinct.

Spermophila falcirostris.

Pyrrhula falcirostris, *Temm. Pl. Enl.* iii. pl. ii. fig. 2 (1824).
Fringilla falcirostris, *Neuwied, Beitr. Naturg. Bras.* iii. p. 584 (1830).
Spermophila falcirostris, *Gray, Gen. B.* ii. p. 386 (1844); *Scl. Ibis*, 1871, p. 20.
? Sporophila olivascens, *Licht. Nomencl. Av. Berol.* p. 45.
Sporophila falcirostris, *Burm. Th. Bras.* iii. p. 252 (1856); *Cab. J. f. O.* 1874, p. 84, note.

Dr. Sclater says that this species would appear to be the female of a species allied to *S. hypoleuca*, but he never met with a specimen of it. Dr. Cabanis, however, says that the Berlin Museum possesses three examples of it from Bahia, and that it is a good species, allied to *S. superciliaris*.

Spermophila flabellum.

Gros-becs appellés queue en éventail de Virginie, *Daubent. Pl. Enl.* iv. pl. 380.
Loxia laticauda, *P. L. S. Müll. Syst. Nat. Suppl.* p. 151 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 252.
Loxia flabellum, *Bodd. Tabl. Pl. Enl.* p. 23 (1783).
Loxia flabellifera, *Gm. Syst. Nat.* i. p. 850 (1788).
Spermophila flabellum, *Gray, Gen. B.* ii. p. 386 (1844); *Scl. Ibis*, 1871, p. 20.
Sporophila flabellifera, *Bp. Consp.* i. p. 499 (1850); *Burm. Th. Bras.* iii. p. 249 (1856).

Daubenton's figures probably represent a female and young male of *Guiraca cærulea*; but I agree with Dr. Sclater that it is impossible to determine them for certain.

Spermophila inornata.

Pyrrhula inornata, *Vig. Zool. Beechey's Voy.* p. 83 (1839).
Spermophila inornata, *Gray, Gen. B.* ii. p. 386.

Dr. Sclater writes :—"This may be a female *Spermophila* or *Guiraca*; but without examination of the type (which has disappeared) it would be impossible to determine the species. No locality is given."

Spermophila leucopsis.

Spermophila leucopsis, *Cab. J. f. O.* 1861, p. 5; *Scl. Ibis*, 1871, p. 20.

Similar to *S. moreleti*, but larger and with a conspicuously larger

bill (*Mus. Berol.*). Probably not to be distinguished from *S. moreleti*.

Spermophila melanops.

Spermophila melanops, *Pelz. Orn. Bras.* pp. 224, 331 (*ex Natterer, MSS.*); *Scl. Ibis*, 1871, p. 21.

Head, neck, ear-coverts, and throat black, strongly defined; back yellowish dusky ash-colour; belly brownish white, the flanks washed with ochreous; quills with a white spot on the base. Total length $4\frac{1}{2}''$, wing $2''\ 1'''$, tail $1''\ 7'''$, bill from gape $4'''$, tarsus $6\frac{1}{2}'''$. (*Pelzeln.*)

Hab. Brazil.

Nearly allied to *S. cærulescens*.

Spermophila melanogaster.

Spermophila melanogaster, *Pelz. Orn. Bras.* pp. 225, 332 (1871, *ex Natterer, MSS.*); *Scl. Ibis*, 1871, p. 21.

Upper surface of body and sides of neck, as well as of the breast and abdomen, ashy grey; rump a little clearer; the underparts black from the throat, except the anal plumes and the thighs, which are whitish; quills dusky brown, white at the base (except the first four); tail-feathers dusky brown, margined with ashy. Total length $4''\ 3'''$, wing $2''\ 2'''$, tail $1\frac{1}{2}''$, bill from gape $4'''$, tarsus $6\frac{1}{2}'''$. (*Pelzeln.*)

Hab. Brazil.

Spermophila ruficollis.

Spermophila ruficollis, *Licht. MSS. in Mus. Berol.*
Sporophila ruficollis, *Cab. Mus. Hein.* Th. i. p. 150, note (1850).
Spermophila ruficollis, *Pelz. Orn. Bras.* p. 225; *Scl. Ibis*, 1871, p. 21.

Hab. Brazil.

Allied to *S. hypoxantha*, of which it is perhaps the young bird, but differing in its whitish breast and abdomen, these parts only tinged with rufous. (*Cf. Sclater. l. c.*)*

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* Besides these species there are several enumerated in the 'Hand-list of Birds' which we have not been able to determine:—

(7585) Spermophila superciliosus. Florida.
(7608) Spermophila mœstus. Brazil.
(7611) Spermophila corallinus. Brazil.

To these must be added—

Sporophila othello, *Bp. Consp.* i. p. 498,

which is either *Oryzoborus funereus* or *Spermophila corvina* (*cf. Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 357).

DOLOSPINGUS.

Dolospingus, *Elliot, Ibis*, 1871, p. 402 ..... Type. D. nuchalis.

Range. River Orinoco.

1. Dolospingus nuchalis.

Dolospingus nuchalis, *Elliot, Ibis*, 1871, p. 402, pl. xi.

Adult male. Head, throat, and entire upper parts black, with slight bluish reflections upon the back; a conspicuous white spot in the centre of the neck behind; primaries brownish black, smaller coverts tipped with white, forming an alar bar; rump white; upper tail-coverts black; tail blackish brown, the feathers rather pointed; entire underparts and flanks white; bill very thick at the base, converging to a sharp point of horn-colour; the base of the mandible and sides of maxilla blackish; feet and tarsi black. Total length 5 inches, wing $2\frac{5}{8}$, tail $2\frac{1}{4}$, tarsus $\frac{5}{8}$. (*Elliot.*)

Hab. R. Orinoco.

MELOPYRRHA.

Melopyrrha, *Bp. C. R.* xxxvii. p. 924 (1853) *..... Type. ♀

The bill in this genus is rather higher than in *Spermophila*, but in reality there is scarcely any difference between the two genera. Even the black coloration of *Melopyrrha* is approached by *Spermophila corvina* and other species.

Range. Confined to Cuba.

1. Melopyrrha nigra.

Loxia nigra, *Linn. Syst. Nat.* i. p. 306 (1766).
Le Bouvreuil ou Bec Rond noir et blanc, *Montb. Hist. Nat. Ois.* iv. p. 394 (1778).
Pyrrhula crenirostris, *Vieill. Ois. Chanteurs*, p. 77 (1805).
Pyrrhula nigra, *Vieill. Galerie des Ois.* i. p. 65, pl. 57 (1825); *Vig. Zool. Journ.* iii. p. 440 (1827); *D'Orb. in Ramon de la Sagra, Hist. Nat. Ois. Cuba*, p. 87, pl. 18 (1838).
Spermophila nigra, *Gray, Gen. B.* ii. p. 386 (1844).
Sporophila nigra, *Bp. Consp.* i. p. 499 (1850).
Melopyrrha nigra, *Cab. J. f. O.* 1856, p. 8; *Scl. Cat. Amer. B.* p. 103 (1862); *Scl. & Salv. Nomencl. Av. Neotr.* p. 28 (1873); *Gundl.*

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* Although custom has now restricted the genus *Melopyrrha* to the Black Seed-Finch of Cuba, it seems that this was hardly the intention of Bonaparte, who writes:—"Je crée le genre *Melopyrrha* pour les soi-disant Bouvreuils noirs d'Amérique non encore déterminés d'une manière satisfaisante."

J. f. O. 1874, p. 125; *Cory, List B. West Ind.* p. 12 (1885); *id. Auk*, iii. p. 206 (1886).
Goniaphea nigra, *Gray, Hand-l. B.* ii. p. 104, nos. 7560, 7566 (1870).

Adult male. Everywhere glossy black, except on the bastard-wing, which is pure white, as also are the base of the primary-coverts and the margin of the inner primaries, forming a narrow line down the wing; axillaries and under wing-coverts pure white; a spot of black on the lower greater coverts near the base of the primaries; quills black below, white along the base of the inner web. Total length 5·4 inches, culmen 0·5, wing 2·55, tail 2·3, tarsus 0·7.
Adult female. Similar to the male, but duller in colour (*Cory*).
Hab. Cuba.

a, *b*. Ad. sk.	Cuba.	Sclater Coll.
c, *d*. Ad. sk.	San Cristobal, Cuba (*G. F. Gaumer*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Tuabeque, Cuba, Nov. 11 (*C. Wright*; Sm. no. 21664).	U.S. Nat. Mus. [P.].

18. CATAMBLYRHYNCHUS.

Type.
Catamblyrhynchus, *Lafr. Rev. Zool.* 1842, p. 301 ..... C. diadema.
Bustamentia, *Bp. Atti Soc. Ital.* vi. p. 406 (1844)..... C. diadema.

Head of *Catamblyrhynchus diadema.*

Range. Colombia and Ecuador to Peru.

1. Catamblyrhynchus diadema.

Catamblyrhynchus diadema, *Lafr. Rev. Zool.* 1842, p. 301; *id. Mag. de Zool.* 1843, pl. 34; *Gray & Mitch. Gen. B.* ii. p. 325, pl. 93 (1844); *Bp. Consp.* i. p. 524 (1850); *Scl. P. Z. S.* 1855, p. 159; *id. Cat. Amer. B.* p. 106 (1862); *Gray, Hand-l. B.* ii. p. 108, no. 7631 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Tacz. P. Z. S.* 1874, p. 520; *Scl. & Salv. P. Z. S.* 1879, p. 507; *Berlepsch & Tacz. P. Z. S.* 1884, p. 293.
Bustamentia capitaurea, *Bp. Atti Soc. Ital.* vi. p. 406 (1844).

Adult male. General colour above dark bluish grey; wing-coverts like the back; bastard-wing, primary-coverts, and quills dusky

blackish, edged with the same colour as the back; upper tail-coverts like the back; tail-feathers blackish, washed with bluish grey on the outer web; crown of head and nape black; forehead and sinciput bright golden, the feathers stiffened and crisp; lores and feathers round eye black, extending in a short line above the ear-coverts, which, with the sides of the hind crown and the entire under surface of the body, are deep chestnut; thighs dark bluish grey; under tail-coverts chestnut; under wing-coverts and axillaries dark bluish grey; quills below dusky blackish, ashy along the inner web: "bill black; feet blackish horn-colour; iris dark brown" (*Jelski*). Total length 6 inches, culmen 0·35, wing 3, tail 3, tarsus 0·85.

Adult female. Similar to the male, with the rufous colour of the underparts less intense and without a rufous band on the rump. (*Taczanowski.*)

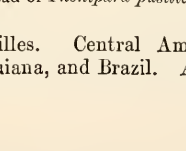
Young. Olive-brown, a little darker on the head; the forehead dusky grey; quills and tail-feathers dusky brown edged with olive, the primaries margined with ashy grey; ear-coverts and sides of face dark brown; under surface of body deep tawny buff, browner on the throat and breast.

Hab. The same as that of the genus.

a. Ad. st.	Bogotá.	Purchased.
b. Ad. sk.	Bogotá.	Purchased.
c, d. Ad.; *e, f.* Jun. sk.	Bogotá.	Sclater Coll.
g. Ad.; *h.* Juv. sk.	Bogotá.	Salvin-Godman Coll.
i. Ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
k. ♂ ad. sk.	San Sebastian, Colombia, 7000 feet (*F. A. Simons*).	Salvin-Godman Coll.
l. Ad. sk.	Intac, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
m. Ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

19. PHONIPARA.

	Type.
Euetheia, *Reichenb. Syst. Nat.* pl. lxxix. fig. 13 (June 1, 1850)	Typo haud indicato.
Phonipara, *Bp. Consp.* i. p. 494 (July 30, 1850)	P. canora.



Head of *Phonipara pusilla.*

Range. All the Antilles. Central America from Mexico to Colombia, Venezuela, Guiana, and Brazil. Accidental in Florida.

Key to the Species.

a. With yellow on the throat.
  a'. A yellow eyebrow and a yellow collar across the lower throat; lores and chin black..... *canora*, p. 144.
  b'. A yellow eyebrow as well as a loral spot and the chin; lower throat black.
    a''. Black on the throat restricted to the fore neck, and never extending on the face as far as the region below the eye ..... *lepida*, p. 145.
    b''. Black on the throat extending on to the breast and nearly to the abdomen, on the side of the face extending over the region of the eye and often over the ear-coverts.. *pusilla*, p. 147.
b. With no yellow on the throat.
  c'. With the black of the breast extending down to the vent; under tail-coverts blackish, edged with dull white ..... *bicolor*, p. 149.
  d'. With the black not extending further than the breast; under tail-coverts yellowish white, with dusky centres ..... *marchii*, p. 150.
  e'. Underparts dull sooty grey; the under tail-coverts edged with ashy fulvous ..... *fuliginosa*, p. 151.

1. Phonipara canora.

Brown-cheeked Grosbeak, *Brown, Ill. Zool.* p. 56, pl. xxiv. fig. 1 (1776); *Lath. Gen. Syn.* ii. pt. 1, p. 155 (1783).
Loxia canora, *Gm. Syst. Nat.* i. p. 858 (1788).
Phonipara canora, *Bp. Consp.* i. p. 494 (1850); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Baird, Brewer, & Ridgway, Hist. N. Amer. B.* ii. p. 93 (1874).
Euetheia canora, *Brewer, Proc. Bost. Soc.* vii. p. 307 (1860); *Gundl. Orn. Cuba*, p. 92 (1878); *Cory, List B. West Indies*, p. 12 (1885); *id. Auk*, iii. p. 209 (1886).
Passerina canora, *Gray, Hand-l. B.* ii. p. 98, no. 7453 (1870).

Adult male. General colour above yellowish green, a little brighter round the hind neck; wing-coverts like the back; bastard-wing, primary-coverts, and quills dusky, externally yellowish green, brighter yellow on the primaries; upper tail-coverts like the back; tail-feathers dusky, externally olive-yellow; crown of head slaty grey, shading off into yellowish green on the occiput and nape; the base of the forehead, lores, feathers round the eye, ear-coverts, cheeks, and throat black, with a narrow superciliary streak of golden yellow; sides of neck and a collar across the lower throat golden yellow; fore neck black; chest and remainder of under surface slaty grey, the breast more ashy in the centre, and the abdomen whiter; sides of body and flanks slaty grey; thighs slaty grey; under tail-coverts yellowish white, with ashy bases to the feathers; under wing-coverts white, washed with olive-yellow, the edge of the wing olive-yellow: axillaries ashy, washed with olive-yellow; quills below dusky, ashy whitish

along the inner edge. Total length 3·7 inches, culmen 0·35, wing 1·84, tail 1·45, tarsus 0·55.

Adult female. Differs from the male in wanting the black on the face and throat, which is replaced by chestnut; the crown dull ashy brown; no black on the breast, which is pale ashy brown like the rest of the under surface; the sides of the neck yellow, but not forming a collar across the fore neck as in the male. Total length 3·4 inches, culmen 0·3, wing 1·75, tail 1·2, tarsus 0·55.

Hab. Cuba.

a, b. ♂ ♀ ad. sk.	Cuba.	Sclater Coll.
c. ♂ ad. sk.	Cuba.	Salvin-Godman Coll.
d. e. ♂ ad. sk.	San Cristobal, Cuba (*G. F. Gaumer*).	Salvin-Godman Coll.

2. Phonipara lepida.

Le Bruant de S. Domingue, *Briss. Orn.* iii. p. 300, pl. xiii. fig. 5 (1760).
L'Olive, *Montb. Hist. Nat. Ois.* iv. p. 363 (1778).
Olive Bunting, *Lath. Gen. Syn.* ii. pt. 1, p. 195 (1783).
Fringilla lepida, *Jacq. Beitr.* p. 7, pl. ii. (1784).
Emberiza olivacea, *Gm. Syst. Nat.* i. p. 870 (1788).
Passerina olivacea, *D'Orb. in Ramon de la Sagra's Hist. Nat. Cuba*, p. 24, pl. xv. (1838).
Spermophila olivacea, *Gray, Gen. B.* ii. p. 386 (1844); *Gosse, B. Jamaica*, p. 249 (1847).
Spermophila adoxa, *Gosse, B. Jamaica*, p. 253, pl. lxv. (1847).
Euetheia lepida, *Cab. Mus. Hein.* Th. i. p. 146 (1850); *id. J. f. O.* 1856, p. 7; *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 597; *Gundl. Orn. Cuba*, p. 91 (1878).
Phonipara olivacea, *Scl. P. Z. S.* 1855, p. 159; *Sallé, P. Z. S.* 1857, p. 232; *Scl. Cat. Amer. B.* p. 107 (1862); *March, Proc. Philad. Acad.* 1863, p. 297; *Bryant, Proc. Bost. Soc. N. H.* xi. p. 93 (1866); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 93 (1874); *Cory, Bull. Nutt. Orn. Club*, vi. p. 152 (1881); *A. & E. Newt. Handb. Jamaica*, 1881, p. 104; *Salv. Cat. Strickl. Coll.* p. 224 (1882); *Cory, B. Haiti & S. Domingo*, p. 65 (1884).
Phonipara adoxa, *March, Proc. Philad. Acad.* 1863, p. 297.
Passerina adoxa, *Gray, Hand-l. B.* ii. p. 98, no. 7456 (1870).
Euetheia olivacea, *Cory, List B. West Indies*, p. 12 (1885); *id. Auk*, iii. p. 208 (1886).
Euetheia adoxa, *Cory, Auk*, iii. p. 210 (1886).
Phonipara pusilla (*nec Sw.*), *Salvin, Ibis*, 1885, p. 190.
Phonipara intermedia, *Ridgw. Descr. Cozumel B.* p. 2; *id. Proc. U.S. Nat. Mus.* viii. p. 568 (1885); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 360 (1885).

Adult male. General colour above olive-green; lesser and median coverts rather brighter and more yellowish green; greater coverts, bastard-wing, primary-coverts, and quills dusky, externally edged with olive-green, more olive-yellow on the primaries; tail-feathers dusky, edged with yellowish green, the centre ones entirely of the

latter colour; crown of head like the back, with a line of dusky black across the forehead, extending above the eye; lores and a narrow eyebrow deep orange-yellow, as well as the eyelid; feathers in front of and below the eye dusky blackish, as also the cheeks; ear-coverts olive-green like the crown; upper throat orange-yellow, lower throat blackish; fore neck and chest ashy olive; the centre of the breast and abdomen yellowish buff, whiter towards the vent; sides of body and flanks ashy olive; thighs whitish; under tail-coverts pale yellow with dusky centres; under wing-coverts and axillaries pale olive-yellow, brighter along the edge of the wing; quills below dusky, ashy along the inner edge: "bill horny black; feet purplish; iris dark hazel" (*P. H. Gosse*). Total length 4 inches, culmen 0·4, wing 2·05, tail 1·5, tarsus 0·6.

Adult female. Different from the male, and not so brightly coloured. Above entirely olive-green; wing-coverts, quills, and tail-feathers dusky, washed externally with the same colour as the back, the edges of the primaries brighter yellow: lores and sides of face like the back; the upper and under margin of the eyelid whitish, and surmounted by a pale yellowish eyebrow running from the base of the bill; chin pale yellow; under surface of body light ashy, the lower throat mottled with black bases to the feathers; centre of breast and abdomen ashy whitish, as also the thighs; under tail-coverts yellowish white, with dusky centres.

Only fully adult birds seem to acquire the black on the throat. It is absent in young birds also, the latter being browner and having the eye-streak very pale yellowish buff.

Hab. Greater Antilles.

a. ♀ ad. sk.	Kingston, Jamaica, June 5, 1859 (*O. S.*).	Salvin-Godman Coll.
b, *c*. ♂ ♀ ad. sk.	Jamaica.	Sclater Coll.
d. Juv. sk.	Jamaica.	P. H. Gosse, Esq. [C.]. (Type of *S. adoxa*.)
e. ♂ ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.].
f. ♂ ad.; *g*. Juv. sk.	Moneagne, Jamaica, Aug. 1861 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Moneague, Jamaica, Feb. 1865 (*Dr. H. Bryant*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Moneague, Jamaica, Feb. 1865 (*Dr. H. Bryant*).	Sclater Coll.
k. ♂; *l*, *m*. ♀ ad. sk.	San Cristobal, Cuba (*G. F. Gaumer*).	Salvin-Godman Coll.
n, *o*. ♂ ♀ ad. sk.	Cuba (*ex Mus. G. F. Lawrence*).	Salvin-Godman Coll.
p. ♂ ad. sk.	San Domingo (*A. Sallé*).	Eyton Coll.
q. ♂ ad. sk.	San Domingo.	Sclater Coll.
r. ♂ ad. sk.	Porto Rico (*Dr. H. Bryant*).	Sclater Coll.
s. ♂ ad. sk.	Porto Rico (*Dr. H. Bryant*).	Salvin-Godman Coll.
t, *u*. ♂ ♀ ad. sk.	Porto Rico.	Dr. H. Bryant [P.].
v. ♀ imm. sk.	Porto Rico (*R. Swift*; Sm. no. 36483).	U.S. Nat. Mus. [P.].

Subsp. *a*. **Phonipara pusilla.**

Tiaris pusilla, *Swains. Phil. Mag.* new series, i. p. 438 (1827).
Fringilla lepida, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Wagler, Isis*, 1831, p. 525; *Cab. J. f. O.* 1863, p. 56.
Tiaris olivacea (*nec Gm.*), *Cass. Proc. Philad. Acad.* 1848, p. 91.
Euetheia pusilla, *Cab. Mus. Hein.* Th. i. p. 146 (1850); *id. J. f. O.* 1861, p. 1.
Phonipara pusilla, *Scl. P. Z. S.* 1855, p. 159, 1856, p. 304, 1859, pp. 365, 379; *Lawr. Ann. Lyc. N. Y.* vii. p. 298 (1861); *Scl. Cat. Amer. B.* p. 106 (1862); *id. P. Z. S.* 1864, p. 174; *id. & Salv. t. c.* p. 352; *Cass. Proc. Philad. Acad.* 1865, p. 169; *Salv. Ibis*, 1866, p. 193; *id. P. Z. S.* 1867, p. 142; *Lawr. Ann. Lyc. N. Y.* ix. pp. 103, 201 (1868); *Frantz. J. f. O.* 1869, p. 301; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Salv. P. Z. S.* 1870, p. 190; *Wyatt, Ibis*, 1871, p. 328; *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Baird, Brew., & Ridgw. Hist. N. Amer. B.* ii. p. 93 (1874); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 20 (1875); *Scl. & Salv. P. Z. S.* 1875, p. 237; *Boucard, P. Z. S.* 1878, p. 58; *Scl. & Salv. P. Z. S.* 1879, p. 507; *Salvin, Cat. Strickl. Coll.* p. 224 (1882); *Boucard, P. Z. S.* 1883, p. 444; *Ridgw. Pr. U.S. Nat. Mus.* v. p. 495 (1883); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 359 (1885).

Adult male. General colour above yellowish green: lesser wing-coverts rather brighter and more olive-yellow; median and greater coverts yellowish green like the back; bastard-wing and primary-coverts dusky, externally edged with yellowish green; quills dusky, externally edged with yellowish green, the secondaries entirely of the latter colour; upper tail-coverts like the back; centre tail-feathers yellowish green, the remainder dusky, edged with yellowish green; crown of head more dusky than the back, the forehead blackish, shading gradually off on the crown; lores and a narrow eyebrow golden yellow, as well as the upper and under margin of the eyelid; feathers round eye, ear-coverts, and cheeks black; chin and upper throat golden yellow; sides of neck olive-green; lower throat, fore neck, and breast blackish, extending a little down the centre of the abdomen, which is dark ashy, slightly shaded with olive; sides of body and flanks olive-yellowish, as also the thighs; under tail-coverts olive-yellowish with dusky centres; under wing-coverts and axillaries olive-yellow, the latter duller like the sides of the breast; quills below dusky, ashy along the inner edge. Total length 4·4 inches, culmen 0·4, wing 2·05, tail 1·65, tarsus 0·65.

Adult female. Different from the male, and wanting the black on the head and face. Above uniform olive-greenish, the wing-coverts like the back; quills and tail-feathers dusky, externally olive-greenish like the back; sides of face and under surface of body also olive-greenish, yellower in the centre of the abdomen; chin pale orange-yellow. Total length 3·8 inches, culmen 0·4, wing 2·1, tail 1·6, tarsus 0·7.

The Cozumel bird, separated by Mr. Ridgway as *P. intermedia*, appears to me, judging from the large series recently presented to the Museum by Messrs. Salvin and Godman, to be inseparable as a species from *P. pusilla*. The Cozumel specimens have the ear-coverts green, as in *P. olivacea*, but the black on the fore neck more extended, though not to the same extent as in *P. pusilla*. At first sight these differences appear well marked and justify the name given by Mr. Ridgway; but when a large series is examined, it is found that some individuals are not to be distinguished from *P. pusilla* from the mainland, *i. e.* Costa Rica and Colombia. Hence it appears that *P. pusilla* and *P. olivacea* merge into each other; and it is certain that they cannot be regarded as more than subspecies, as has already been pointed out by Messrs. Baird, Brewer, and Ridgway.

Hab. From Mexico, throughout Central America to Panama and Colombia.

a. ♂ ad. sk.	Orizaba, Mexico (*Botteri*).	Sclater Coll.
b. ♂ ad. sk.	Jalapa, Mexico (*de Oca*).	Salvin-Godman Coll.
c. ♂ ad. sk.	N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Sakluk Peten, Guatemala, April 1862 (*O. S.*).	Salvin-Godman Coll.
e. ♂ ad. sk.	San José, Costa Rica (*J. Carmiol*; Sm. no. 33355).	Salvin-Godman Coll.
f, g. ♂ ad. sk.	Turrialba, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Sachi, Costa Rica (*J. Carmiol*; Sm. no. 41387).	Salvin-Godman Coll.
i. ♂ imm. sk.	Chitra, Panama (*E. Arcé*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Santa Fé, Panama (*E. Arcé*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Lion-Hill Station, Panama (*McLeannan*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Panama (*McLeannan*).	Sclater Coll.
n. ♂ ad. sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Bogotá, U.S. Colombia.	Salvin-Godman Coll.
p. ♂ ad. sk.	Bogotá.	Sclater Coll.
q. ♀ ad. sk.	Bogotá.	Purchased.
r. ♂ ad. sk.	Medellin, Antioquia, U.S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.

α. P. intermedia.

a. ♂ ad. sk.	Cozumel Island (*C. J. E. Devis*).	Salvin-Godman Coll.
b–k. ♂ ad.; *l, m.* [♀ ad.] sk.	Cozumel Island, April 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.
n, o, p. ♂ ad.; *q, r.* ♀ ad. sk.	Jolbox Island, Dec 1886 (*G. F. Gaumer*).	Salvin-Godman Coll.

3. Phonipara bicolor.

The Bahama Sparrow, *Catesby, N. H. Carolina*, i. p. 37, pl. 37 (1731).
Le Verdier de Bahama, *Briss. Orn.* iii. p. 202 (1760).
Fringilla bicolor, *Linn. Syst. Nat.* i. p. 324 (1766).
Tiaris omissa, *Jard. Ann. Nat. Hist.* xx. p. 332 (1847).
Phonipara bicolor, *Bp. Consp.* i. p. 106 (1850); *A. & E. Newt. Ibis*, 1859, pp. 147, 376, 378, pl. xii. fig. 2; *Cass. Proc. Philad. Acad.* 1860, p. 376; *Sundev. Öfv. K. Vet.-Akad. Förh. Stockh.* 1869, pp. 583, 596; *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Scl. P. Z. S.* 1874, p. 175, 1876, p. 14; *Lawr. Pr. U.S. Nat. Mus.* i. pp. 58, 191, 233, 239, 270, 278 (1878); *id. tom. cit.* pp. 355, 457, 487 (1879); *Scl. P. Z. S.* 1879, p. 765; *Lister, Ibis*, 1880, p. 41; *Cory, B. Bahamas*, p. 91 (1880); *id. Bull. Nutt. Orn. Club*, vi. p. 152 (1881); *Tristr. Ibis*, 1884, p. 168.
Spermophila bicolor, *Bryant, Proc. Bost. Soc. N. H.* vii. p. 119 (1861).
Phonipara omissa, *Sclater, Cat. Amer. B.* p. 106 (1862); *E. C. Taylor, Ibis*, 1884, p. 167.
Phonipara zena, var. portoricensis, *Bryant, Proc. Bost. Soc. N. H.* x. p. 254 (1866).
Phonipara zena, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 93 (1874); *Maynard, B. East. N. Amer.* p. 87, pl. ii. (1879); *Ridgw. Proc. U. S. Nat. Mus.* iii. pp. 218, 221 (1880); *Coues, Check-list*, p. 59 (1882); *id. Key N. Amer. B.* p. 392 (1884); *Cory, B. S. Domingo*, p. 63 (1884).
Euetheia bicolor, *Gundlach, J. f. O.* 1874, p. 312; *Cory, List B. West Indies*, p. 12 (1885); *id. Auk*, iii. p. 209 (1886); *A. O. U. List N. Amer. B.* p. 289 (1886).

Adult male. General colour above dull olive-green, more dusky on the mantle and upper back; lesser and median coverts olive-green like the back; greater coverts, bastard-wing, primary-coverts, and quills dusky brown, externally edged with dull olive-green; upper tail-coverts like the back; tail-feathers dusky brown, edged with dull olive-green, the centre ones washed with the latter colour; crown of head dingy black, washed with olive and gradually shading off into the dusky olive of the back; lores, feathers round eye, ear-coverts, cheeks, throat, and breast sooty black; the abdomen and under tail-coverts rather more ashy, and margined with ashy whitish; sides of body and flanks olive-greenish; thighs dusky olive; under wing-coverts and axillaries sooty black like the breast; quills below blackish, ashy along the inner edge. Total length 4 inches, culmen 0·4, wing 2·15, tail 1·7, tarsus 0·6.

Adult female. Different from the male and lacking the black. General colour above olive-greenish, including the head; wing-coverts like the back; quills and tail-feathers dusky brown, edged with olive-greenish; sides of face dull ashy brown, washed with olive; throat sooty grey, extending on to the chest and down the sides of the breast, and slightly washed with olive; centre of breast and abdomen whitish, slightly tinged with yellow; sides of body

and flanks olive-brown. Total length 3·5 inches, culmen 0·4, wing 1·8, tail 1·3, tarsus 0·6.

An *adult male* from Colombia has the black extending down the centre of the abdomen, but not reaching to the vent; sides of body and flanks very pale grey; upper surface lighter olive-green. Total length 4 inches, culmen 0·45, wing 2, tail 1·5, tarsus 0·65.

Hab. Lesser Antilles generally; Venezuela and Colombia.

a. ♂ ad. sk.	Antilles.	Sclater Coll.
b. ♂ ad. sk.	Montserrat (*Sturge*).	Sclater Coll.
c. ♂ ad. sk.	Dominica (*F. Ober*).	Sclater Coll.
d. ♂ ad. sk.	Inagua, Bahamas (*Dr. H. Bryant*).	Sclater Coll.
e. ♂ ad. sk.	Bahamas.	Dr. H. Bryant [P.].
f. ♂ ad. sk.	Bahamas (*Dr. H. Bryant*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Bahamas (*Blake*).	Sclater Coll.
h, i. ♂ ♀ ad. sk.	Tobago (*Kirk*).	Sclater Coll.
k. ♂ ad. sk.	Carupano, Venezuela (*A. Goering*).	Sclater Coll.
l. ♂ ad. sk.	Caracas, Venezuela (*A. Goering*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Bogotá.	Sclater Coll.
n. ♂ ad. sk.	Bogotá (*G. Crowther*).	Salvin-Godman Coll.

Subsp. *a.* **Phonipara marchii.**

Spermophila bicolor (*nec L.*), *Gosse, B. Jamaica*, p. 252, pl. 64 (1847); *Sel. Cat. Amer. B.* p. 106 (1862).

Spermophila adoxa, *Gosse, B. Jamaica*, p. 253 (1847); *Bryant, Proc. Bost. Soc. N. H.* vii. p. 119 (1865).

Phonipara marchii, *Baird, Proc. Philad. Acad.* 1863, p. 297; *Sel. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *A. & E. Newton, Handb. Jamaica*, p. 104 (1881); *Salvin, Cat. Strickl. Coll.* p. 224 (1882).

Phonipara zena, var. marchii, *Bryant, Pr. Bost. Soc. N. H.* xi. p. 93 (1867).

Passerina marchii, *Gray, Hand-l. B.* ii. p. 98, no. 7457 (1870).

Gyrinorhynchus portoricensis, *Gray, Hand-l. B.* ii. p. 107, no. 7617 (1870).

Adult male. Similar to *P. bicolor*, but with the black much less extended on the chest, the abdomen pale ashy, the under tail-coverts yellowish white with dusky centres, the under wing-coverts olive-yellowish: "bill dusky brown, the lower mandible lighter; legs and claws dusky brown; iris dark brown" (*E. Newton*). Total length 3·8 inches, culmen 0·4, wing 2·05, tail 1·6, tarsus 0·6.

The series in the British Museum seems to prove the existence of a race of *P. bicolor* worthy of separation as *P. marchii*; but Mr. Cory believes that there is only one species, and he unites the birds from all the islands.

Hab. Jamaica, San Domingo, S. Croix, Santa Lucia, S. Thomas, and Barbadoes.

a. ♂ ad. sk.	West Indies (*E. C. Taylor*).	Sclater Coll.
b. ♂ ad. sk.	Jamaica.	Sclater Coll.
c. ♂; *d*, *e*. ♀ ad. sk.	Jamaica.	P. H.Gosse,Esq.[C.].
f. ♂ ad. sk.	Spanishtown, Jamaica, Aug. 10, 1861 (*W. W. Marsh*; Sm. no. 24393).	U.S. Nat. Museum [P.].
g. ♀ juv. sk.	Spanishtown, Jamaica (*W. T. March*; Sm. no. 24398).	U.S. Nat. Museum [P.].
h, *i*. ♂ ♀ ad. sk.	Spanishtown, Jamaica (*W. T. March*; Sm. nos. 24398 and 22198).	Sclater Coll.
k. ♂ ad. sk.	S. Andrews, Jamaica, March 5, 1879 (*E. Newton*).	Salvin-Godman Coll.
l. ♀; *m*. ♂ juv. sk.	Jamaica (*W. Osburn*).	Sclater Coll.
n. ♂ ad. sk.	Samana, San Domingo, Sept. 16, 1883 (*C. G. McGregor*).	Salvin-Godman Coll.
o. ♀ ad. sk.	S. Thomas, Dec. 1, 1857 (*O. Salvin*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Santa Lucia (*Semper*).	Sclater Coll.
q, *r*. ♂ ♀ ad. sk.	S. Croix (*A. Newton*).	Sclater Coll.
s. ♂ ad. sk.	Barbadoes (*Briggs*).	Sclater Coll.
t. ♂ ad. sk.	Barbadoes.	Sir R. Schomburgk [P.].

5. Phonipara fuliginosa.

Fringilla fuliginosa, *Neuwied, Beitr. Naturg. Bras.* iii. pt. 1, p. 629 (1830).

Sporophila unicolor, *Licht. Nomencl. Av.* p. 45 (1854).

Oryzoborus unicolor, *Burm. Th. Bras.* ii. p. 240 (1856); *Pelz. Orn. Bras.* pp. 222, 329 (1871).

Amaurospiza unicolor, *Cab. J. f. O.* 1866, p. 307; *Salv. Ibis*, 1886, p. 503.

Amaurospiza fuliginosa, *Cab. J. f. O.* 1874, p. 85.

Phonipara fumosa, *Lawr. Ann. Lyc. N. Y.* x. p. 396 (1874); *Ridgw. Pr. U. S. Nat. Mus.* iv. p. 172 (1881); *Salv. Ibis*, 1885, p. 215.

Phonipara phæoptila, *Salvin & Godman, Ibis*, 1884, p. 445.

Adult male. General colour above sooty black with a slight wash of olive, the lower back, rump, and upper tail-coverts washed with grey; lesser and median coverts like the back and similarly tinted with olive; greater coverts, bastard-wing, primary-coverts, quills, and tail-feathers black, very slightly glossed with olive externally; crown of head, sides of face, and under surface of body black, washed slightly with olive on the crown and ear-coverts; the breast and abdomen dull sooty grey, as also the sides of the body and flanks; under tail-coverts dull sooty grey, with ashy-fulvous margins; under wing-coverts sooty blackish, with whitish bases; axillaries also sooty black, ashy internally; quills below dusky, the inner edge ashy: "bill blackish horn-colour; feet greyish fleshy-brown" (*Neuwied*). Total length 4·5 inches, culmen 0·45, wing 2·35, tail 1·8, tarsus 0·65.

A specimen from Pernambuco, collected by Mr. Craven. is probably the adult female. It differs from the bird described in being entirely sooty black, without any ashy on the breast and abdomen. Total length 4·3 inches, culmen 0·45, wing 2·3, tail 1·75, tarsus 0·65.

Hab. Guiana and Brazil.

a. ♂ ad. sk.	Roraima, 3500 feet, Nov. 29, 1883 (*H. Whitely*).	Salvin-Godman Coll. (Type of *P. phæoptila.*)
b. ♂ ad. sk.	Brazil.	Sclater Coll.
c. Ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Coll.
d. Ad. sk.	Pernambuco (*Craven*).	Sclater Coll.

20. VOLATINIA.

Volatinia, *Reichenb. Syst. Av.* tab. lxxix. fig. 16 (1850) ..... Typo haud indicato.

Range. Throughout Central America and South America to Brazil, Peru, and Bolivia.

1. Volatinia jacarini.

The Jacarini, *Edwards, Gleanings*, ii. p. 202, pl. 306 (1760).
Le Tangara noir du Brésil, *Briss. Orn.* iii. p. 28 (1760).
Tanagra jacarini, *Linn. Syst. Nat.* i. p. 314 (1760).
Le Jacarini, *Buff. Hist. Nat. Ois.* iv. p. 293 (1778); *Vieill. Ois. Chant.* pl. 33 (1805).
Moineau de Cayenne, *Daubent. Pl. Enl.* iv. pl. 224. fig. 3.
Jacarini Tanager, *Lath. Gen. Syn.* ii. pt. 1, p. 238 (1783).
Volatin, *Azara, Apunt.* i. p. 513 (1802).
Fringilla splendens, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 173 (1817, *ex Buff.*).
Passerina jacarini, *Vieill. op. cit.* xxv. p. 14 (1817).
Euphone jacarina, *Licht. Verz. Doubl.* p. 30 (1823).
Emberiza jacarina, *D'Orb. & Lafr. Syn. Av. in Mag. de Zool.* 1837, p. 81.
Spiza jacarina, *Hartl. Ind. Azara*, p. 9 (1847); *Tschudi & Cab. Faun. Peruan.* p. 220 (1855).
Tiaris jacarina, *Gray, Gen. B.* ii. p. 375 (1849); *Léot. Ois. Trinid.* p. 312 (1866); *Gray, Hand-l. B.* ii. p. 97, no. 7433 (1870).
Volatinia jacarina, *Bp. Consp.* i. p. 473 (1850); *Cab. Mus. Hein.* Th. i. p. 147 (1850); *Scl. P. Z. S.* 1855, p. 160, 1856, p. 304; *Burm. Th. Bras.* iii. p. 234 (1856); *Scl. P. Z. S.* 1859, p. 365; *id. & Salv. Ibis*, 1859, p. 17; *Cab. J. f. O.* 1861, p. 2; *Lawr. Ann. Lyc. N. Y.* vii. p. 332 (1861); *Scl. Cat. Amer. B.* p. 106 (1862); *E. C. Taylor, Ibis*, 1864, p. 83; *Scl. P. Z. S.* 1864, p. 174; *id. & Salv. t. c.* p. 352; *Lawr. Ann. Lyc. N. Y.* viii. p. 176 (1866); *Scl. P. Z. S.* 1866, p. 97; *id. & Salv. t. c.* p. 181; *Salv. P. Z. S.* 1867, p. 142; *Scl. & Salv. t. c.* pp. 572, 750; *Lawr. Ann. Lyc. N. Y.* ix. pp. 103, 201 (1868); *Scl. & Salv. P. Z. S.* 1868, pp. 163, 173, 569, 1869.

p. 597; *Frantz. J. f. O.* 1869, p. 301; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 55. (1869); *Salv. P. Z. S.* 1870, p. 190; *Finsch, t. c.* p. 582; *Sel. & Salv. t. c.* p. 836; *Pelz. Orn. Bras.* pp. 226, 438 (1871); *Wyatt, Ibis.* 1871, p. 328; *Scl. & Salv. Nomencl. Av. Neotr.* p. 29; *iid. P. Z. S.* 1873, p. 264; *Layard, Ibis,* 1873, p. 380; *Lawr. Mem. Bost. Soc. N. H.* ii. p. 276 (1874); *Tacz. P. Z. S.* 1874, p. 520; *Lawr. Bull. U. S. Nat. Mus.* no. 4, p. 20 (1876); *Boucard, P. Z. S.* 1878, p. 57; *Salv. & Godman, Ibis,* 1879, p. 200; *Scl. & Salv. P. Z. S.* 1879, pp. 507, 605; *Tacz. P. Z. S.* 1880, p. 199; *Forbes, Ibis,* 1881, p. 336; *Tacz. P. Z. S.* 1882, p. 17; *Salv. Cat. Strickl. Coll.* p 223 (1882); *id. P. Z. S.* 1883, p. 421; *Boucard, t. c.* p. 444; *Nutt. & Ridgw. Pr. U. S. Nat. Mus.* vi. p. 383 (1883); *Salv. Ibis,* 1885, p. 215; *Tacz. Orn. Pérou,* iii. p. 25 (1886).

Volatinia splendens, *Bp. Consp.* i. p. 474 (1850); *Scl. P. Z. S.* 1859, p. 140, 1860, p. 275; *Pelz. Orn. Bras.* p. 438 (1871); *Salv. Ibis,* 1885, p. 215; *id. & Godm. Biol. Centr.-Amer., Aves,* i. p. 357 (1885).

Volatinia jacarina splendens, *Berl. & Tacz. P. Z. S.* 1883, p. 551, 1884, p. 294, 1885, p. 84.

Adult male (Bahia; *Wucherer*). Glossy blue-black above and below; the upper scapulars white at the base, forming a silky spot which covers the bend of the wing and is contiguous to the white under wing-coverts; bastard-wing, primary-coverts, quills, and tail-feathers blackish brown, edged with glossy steel-black; axillaries and under wing-coverts entirely silky white, with a patch of glossy blue-black feathers, formed by the outer greater coverts near the base of the primaries; quills blackish below, white near the base of the inner web, this white scarcely visible on the primaries, but very distinct on the secondaries: "bill blackish, the lower mandible clearer grey; feet whitish horny; iris dark brown" (*Jelski*). Total length 4·1 inches, culmen 0·4, wing 2·15, tail 1·7, tarsus 0·65.

The *adult male in seasonal plumage* differs from the summer plumage in being entirely brown above; the sides of the face and under surface of body are black, obscured by whity-brown edges to the feathers. The full plumage is gained, not by the shedding of the pale edges to the feathers, as might have been expected, but by a direct moult.

Adult female. Different from the male. General colour above uniform earthy brown, a trifle more ashy on the rump; wing-coverts blackish brown, margined with whity brown, slightly tinged with rufous; bastard-wing, primary-coverts, and quills blackish brown, margined with reddish brown, the primaries with ashy; upper tail-coverts dusky brown, washed with reddish brown; tail-feathers dark brown, edged with lighter brown, paler on the outer feather, which has a white spot at the tip; crown of head a trifle more ashy than the back; lores and feathers round the eye ashy whitish; ear-coverts uniform brown; cheeks paler brown; throat dull white, slightly mottled with dusky bases to the feathers: fore neck, breast,

sides of body, and flanks pale yellowish brown, streaked with blackish brown, more narrowly on the latter; abdomen dull whitish; thighs and under tail-coverts pale yellowish brown, with darker brown shaft-streaks; under wing-coverts and axillaries buffy white, the edge of the wing mottled with dark-brown bases to the feathers; quills below dusky, ashy whitish along the inner edge: "bill brownish horn-colour; feet horn-colour; iris dark brown" (*Jelski*). Total length 4·3 inches, culmen 0·4, wing 1·9, tail 1·5, tarsus 0·6.

The *adult female in seasonal plumage* is more olive-brown than in summer, and has more of an olive-yellowish tinge on the breast and sides of the body, the dark streaks being very distinct and the abdomen pure white.

The *young female* resembles the adult female, but is umber-brown, with a rufescent tinge on the fore part of the crown and on the edges of the greater wing-coverts and inner secondaries; the under surface deep ochraceous buff, almost uniform, with only a few dusky centres to the feathers of the fore neck and breast.

Peruvian and Brazilian specimens have white axillaries, white under wing-coverts and quill-lining; the white shoulder-spot is very large and distinct.

Central-American specimens have black axillaries and under wing-coverts and black quill-lining; the white shoulder-spot is very small and difficult to distinguish. Specimens from Trinidad and Tobago, also some from British Guiana, Rio Negro, and Bogotá, have the same characters.

It seems certain, from an examination of a large series, that some specimens from the above localities occasionally show an admixture of white on the axillaries, and also have the quill-lining more or less white; and as these will generally be found to be more or less in seasonal plumage, it would appear that the male, in its first winter, still retains sufficient of the characters of the adult female (which it at first greatly resembles) to account for a certain amount of white under the wing. This seems the more probable, as these intermediate specimens do not agree in the amount of white, which bears every indication of passing into a completely black underwing.

If, therefore, it could be proved that the above reasoning were correct and the characters constant, we should have two species with well-defined ranges; but some specimens from Colombia and Para, fully adult males, appear to be intermediate as regards the amount of white; and therefore it seems better to recognize but one species, varying to the south in the direction of a white quill-lining, and to the north in the direction of a perfectly black one. The specimens obtained by Mr. Whitely on the Carimang River in different months also confirm this last suggestion.

Hab. The same as that of the genus.

a. ♀ ad. sk.	Lima, Peru, Jan. 1 (*W. Nation*).	Sclater Coll.
b, *c*. ♂ ♀ ad. sk.	Tambo Valley, Peru, Oct. 1867.	H. Whitely [C.].
d. ♂ ad. sk.	Tambo Valley, Oct. 28, 1867 (*H. Whitely*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Callao, Peru, Dec. 1881 (*A. H. Markham*).	Salvin-Godman Coll.
f, *g*. ♂ ♀ ad. sk.	Consata, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
h. ♂ ad. st.	Brazil.	J. Gould, Esq. [P.].
i. ♂ ad. sk.	Brazil.	M. Claussen [P.].
k, *l*. ♂ ad. sk.	Bahia, Brazil (*O. Wucherer*).	Salvin-Godman Coll.
m, *n*. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
o. ♀ juv. sk.	Pernambuco (*W. A. Forbes*).	Sclater Coll.
p, *q*. ♂ ad. sk.	Para (*A. R. Wallace*).	Salvin-Godman Coll.
r, *s*. ♂ imm. sk.	Para.	R. Graham, Esq. [P.].
t. ♂ ad. sk.	Guia, Upper Rio Negro (*A. R. Wallace*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Barra do Rio Negro, Jan. 1850 (*A. R. Wallace*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Cayenne.	Sclater Coll.
w. [♀] imm. sk.	Roraima, British Guiana, Nov. 28, 1881 (*H. Whitely*).	Salvin-Godman Coll.
x. ♂ imm. sk.	Roraima, Dec. 17, 1881 (*H. W.*).	Salvin-Godman Coll.
y. ♂ ad. sk.	Bartica Grove, British Guiana, Feb. 21, 1880 (*H. W.*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Carimang River, British Guiana, March 27, 1886 (*H. W.*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Carimang River, May 6, 1886 (*H. W.*).	Salvin-Godman Coll.
b', *c'*. ♂ ad. sk.	Carimang River, July 1885 (*H. W.*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	Trinidad.	Sclater Coll.
e', *f'*. ♂ ♀ ad.; *g'*. ♂ imm. sk.	Tobago (*J. Kirk*).	Sclater Coll.
h'. ♂ ad. sk.	San José, Santa Marta, U.S. Colombia, 5000 feet (*F. Simons*).	Salvin-Godman Coll.
i', *k'*. ♂ ♀ ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
l'. ♂ ad. sk.	Bogotá, U.S. Colombia.	Sclater Coll.
m'. ♂ juv. sk.	Pallatanga, Ecuador, Aug. 1858 (*L. Fraser*).	Sclater Coll.
n'. ♂ ad. sk.	Guayaquil.	G. Barclay, Esq. [P.].
o', *p'*. ♂ ♀ ad. sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
q'. ♂ ad. sk.	Lion Hill Station, Panama (*McLeannan*).	Salvin-Godman Coll.
r'. ♂ ad. sk.	Chitra, Panama (*E. Arcé*).	Salvin-Godman Coll.
s'. ♀ imm. sk.	Barranca, Costa Rica, April 19, 1864 (*J. Carmiol*).	Salvin-Godman Coll.
t'. ♂ ad. sk.	Guatemala (*Constancia*).	Sclater Coll.
u'. ♂ ad. sk.	Dueñas, Guatemala, Aug. 12, 1859 (*O. S.*).	Salvin-Godman Coll.
v', *w'*. ♂ ♀ ad. sk.	Retalhuleu, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.

x'. ♂ ad. sk.	Belize, British Honduras.	Salvin-Godman Coll.
y', *z'*. ♂ ad. sk.	Izamal, N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
a. ♂ ad. sk.	Presidio, Mexico, May 18 (*A. Forrer*).	Salvin-Godman Coll.
β. ♂ imm. sk.	Presidio, June 1 (*A. Forrer*).	Salvin-Godman Coll.

21. AMAUROSPIZA.

Type.

Amaurospiza, *Cab. J. f. O.* 1861, p. 3 ..... A. concolor.

Range. Central America, from Costa Rica to Panama; Ecuador; Brazil.

Key to the Species.*

a. Axillaries and under wing-coverts like the breast.
  a'. Above slaty bluish, the head like the back . *concolor*, p. 156.
  b'. Above slaty bluish, but the forehead and eyebrow slightly paler bluish grey ..... *æquatorialis*, p. 157.
b. Axillaries, under wing-coverts, and quill-lining white ..... *axillaris*, p. 157.

1. Amaurospiza concolor.

Amaurospiza concolor, *Cab. J. f. O.* 1863, p. 3; *Frantz. J. f. O.* 1869, p. 301; *Salv. Ibis*, 1869, p. 313; *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 350 (1885).

Adult male. General colour above slaty black, or blackish washed with slaty blue, more apparent on the lesser wing-coverts, where, however, it is not sufficiently pronounced to form a shoulder-patch; quills browner, the secondaries blackish, washed externally with slaty blue like the greater wing-coverts; tail-feathers blackish, washed externally with slaty blue; sides of face, ear-coverts, and throat blackish; rest of under surface of body dull slaty bluish; axillaries and under wing-coverts like the breast; quills dusky below, ashy along the edge of the inner web. Total length 4 inches, culmen 0·4, wing 2·25, tail 1·7, tail 0·7.

Hab. Costa Rica to Panama.

a. ♂ ad. sk.	Paraiso Station, Panama (*Hughes*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Chiriqui, Panama (*Arcé*).	Salvin-Godman Coll.

* So closely allied are these species that I have omitted from the Key those which I have not seen, as it is impossible to determine them from descriptions alone.

2. Amaurospiza æquatorialis.

Adult male. Similar to *A. concolor*, but with a somewhat lighter bluish shade on the upper parts, especially on the head, which is paler slaty blue on the forehead and eyebrow, these parts contrasting with the black lores and ear-coverts. Total length 4·5 inches, culmen 0·4, wing 2·45, tail 1·85, tarsus 0·7.

Adult female. Different from the male. General colour above light tawny brown; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills dusky brown, externally like the back; the primaries edged with whity brown; rump and upper tail-coverts a little clearer tawny brown than the back; tail-feathers blackish, edged with tawny brown: crown of head, sides of face, and ear-coverts dull tawny brown, a little lighter above the eye; cheeks and under surface of body tawny, a little paler on the breast and abdomen; under wing-coverts and axillaries pale tawny; quills below dusky brown, ashy along the inner edge. Total length 4 inches, culmen 0·35, wing 2·25, tail 1·65, tarsus 0·65.

Hab. Ecuador.

a. ♂ ad. sk.	Pallatanga, Ecuador (*L. Fraser*).	Sclater Coll. (Type of species.)
b. ♀ ad. sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.

3. Amaurospiza axillaris.*

Adult male. Similar to *A. concolor*, but darker, the general colour being black with a slaty-grey wash, but the crown of the head, sides of face, and under surface of the body are entirely black, the flanks

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* AMAUROSPIZA CÆRULATRA.

Amaurospiza cærulatra, *Cab. J. f. O.* 1866, p. 387.
Goniaphea cærulatra, *Gray, Hand-l. B.* ii. p. 103, no. 7545 (1870).

Hab. Rio, Brazil.

The description reads very much like that of *A. axillaris*, but no mention is made of the white under wing-coverts and axillaries.

AMAUROSPIZA FRINGILLOIDES.

Oryzoborus? fringilloides, *Pelz. Orn. Bras.* p. 329 (1870).
Goniaphea fringilloides, *Gray, Hand-l. B.* ii. p. 103, no. 7543 (1870).

Adult female. Cinnamon-brown; throat, middle of lower breast, and abdomen rufescent white; bill similar in shape to that of *O. unicolor*, elongated and Finch-like, dull ashy; feet also dull ashy. Total length 5″ 9‴, wing 2″ 4‴, tail 2″ 4‴, bill from gape in a straight line 6‴, tail 7½‴. (*Pelzeln.*)

Hab. River Xié, Brazil.

Judging from the coloration of the sexes in the Ecuador species, *A. fringilloides* is most probably the female of my *A. axillaris*, but direct comparison is necessary.

and lower abdomen sooty blackish ; axillaries and under wing-coverts white with black bases ; a blackish patch near the edge of the wing : quills blackish below, white along the edge of the inner web. Total length 5·1 inches, culmen 0·45, wing 2·55, tail 2·15, tarsus 0·7.

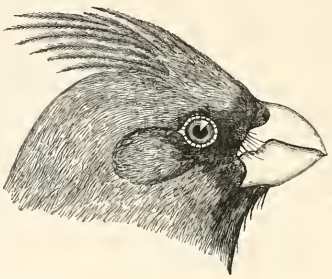
Hab. Brazil.

a. ♂ ad. sk. Brazil. J. Gould, Esq.

22. PYRRHULOXIA.

Type.

Pyrrhuloxia, *Bp. Consp.* i. p. 500 (1850) ..... P. sinuata.



Head of *Pyrrhuloxia sinuata.*

Range. Southern border of United States, from the valley of the Rio Grande westward and southward into Mexico.

1. Pyrrhuloxia sinuata.

Cardinalis sinuatus, *Bp. P. Z. S.* 1837, p. 111 ; *Gray, Gen. B.* ii. p. 358 (1844) ; *Bp. Consp.* i. p. 500 (1850) ; *Cass. B. Calif.* p. 204, pl. 33 (1856) ; *Gray, Hand-l. B.* ii. p. 103, n. 7534 (1870).

Pyrrhuloxia sinuata, *Bp. Consp.* i. p. 500 (1850) ; *Baird, B. N. Amer.* p. 508 (1858) ; *id. Mex. Bound. Surv., Birds*, p. 17 (1859) ; *Dresser, Ibis*, 1865, p. 491 ; *Dugès, La Nat.* i. p. 139 (1868) ; *Cooper, B. Calif.* p. 236 (1870) ; *Coues, Key N. Amer. B.* p. 150 (1872) ; *Lawr. Mem. Bost. Soc. N. H.* ii. p. 275 (1874) ; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 95 (1874) ; *Hensh. Rep. Zool. Expl. 100th Merid.* p. 302 (1875) ; *Sennett, Bull. U. S. Geol. Surv.* iv. p. 4 (1878), v. p. 393 (1879) ; *Merrill, Pr. U. S. Nat. Mus.* i. p. 129 (1878) ; *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 27 (1881) ; *Coues, Check-list*, p. 60 (1882) ; *Belding, Pr. U. S. Nat. Mus.* v. p. 541 (1883), vi. p. 343 (1883) ; *Coues, Key N. Amer. B.* 2nd ed. p. 393 (1884) ; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 343 (1884) ; *Brown, Auk*, ii. p. 122 (1884) ; *A. O. U. Check-list N. Amer. B.* p. 286 (1886).

Adult male. General colour above ashy brown ; wing-coverts dull crimson, more or less obscured by the ashy-brown margins and dusky tips to the feathers ; the outer lesser wing-coverts brighter crimson, like the edge of the wing ; the inner secondaries ashy brown like the back, with only a mesial tinge of dull crimson ; upper tail-coverts pale ashy, with crimson bases ; tail-feathers deep crimson or maroon, becoming dusky towards the ends of the feathers ; crown of head ashy like the back, mottled with crimson centres to the feathers, the long crest-feathers deep crimson with blackish centres ; sides of face, ear-coverts, and sides of neck dull ashy, washed here and there slightly with crimson ; feathers round the eye and lores, as well as the base of the cheeks, crimson ; throat and breast fine crimson, the latter slightly obscured with ashy margins to the feathers ; the abdomen slightly paler crimson and mixed with white ; the under tail-coverts crimson with pale ashy margins ; thighs crimson ; sides of breast and flanks pale ashy ; under wing-coverts and axillaries fine crimson ; quills dusky below, pale crimson along the inner webs : "bill yellowish" (*Cooper*). Total length 7·75 inches, culmen 0·65, wing 3·6, tail 3·9, tarsus 0·9.

Adult female. Different from the male. General colour above dull ashy brown with a slight ochreous tinge ; the long crest-feathers blackish, or dark crimson with blackish centres ; lesser and median wing-coverts dull ashy with dark crimson centres ; bastard-wing and greater coverts dusky brown, externally ashy, paler at tips ; primary-coverts and quills dusky, with ashy margins, the secondaries with concealed crimson near the bases, the primary-coverts and primaries externally washed with crimson towards the base ; tail-feathers blackish brown, slightly edged with ashy, with more or less of a concealed shade of dark crimson, increasing in extent towards the outer feathers ; ear-coverts, sides of face, and sides of neck dull ashy ; feathers in front of the eye, lores, and fore part of cheeks dusky blackish ; the base of the forehead with a slight wash of crimson ; chin whitish, slightly mottled with dusky ; throat, breast, and sides of the body dull ashy, washed with ochreous ; the lower breast, abdomen, and under tail-coverts clearer ochreous buff ; thighs ochreous, washed with crimson ; under wing-coverts and axillaries light crimson ; quills dusky below, crimson along the inner web. Total length 7·5 inches, culmen 0·65, wing 3·6, tail 3·85, tarsus 0·95.

Hab. Same as that of the genus.

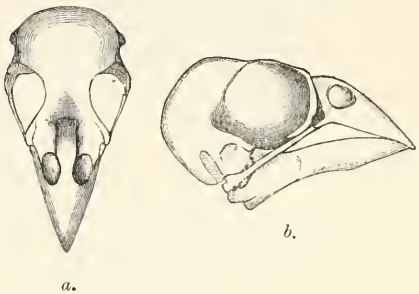
a. ♀ ad. sk.	California.		
b. ♂ ad. sk.	Tuczon, Arizona, Feb. 2, 1884 (*E. W. Nelson* ; Sm. no. 98935).	R. B. Sharpe, Esq. [P.].
c. ♂ ad. sk.	Tuczon, Arizona, May 28 (*E. W. Nelson* ; Sm. no. 98938).	U. S. Nat. Museum [P.].
d. ♂ ad. sk.	Eagle Pass, Texas, Dec. 15 (*H. E. Dresser*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Eagle Pass, Feb. 3 (*H. E. D.*).	Salvin-Godman Coll.

f. ♂ ad. sk.	Eagle Pass, Dec. (*H. E. D.*).	Sclater Coll.
g. ♂ juv. sk.	Rio Grande, Texas, July 27 (*Dr. H. B. Butcher*; Sm. no. 45361).	R. B. Sharpe, Esq. [P.].
h. ♀ ad. sk.	Rio Grande, Texas, July 22 (*Dr. H. B. Butcher*; Sm. no. 45357).	U. S. Nat. Museum [P.].
i. ♀ ad. sk.	Laredo, Rio Grande, Dec. (*Dr. H. B. Butcher*; Sm. no. 46994).	U. S. Nat. Museum [P.].
k. ♂ ad. sk.	Ring-gold Barracks, Texas.	Sclater Coll.
l. ♂ ad. sk.	El Paso, Mexico, Jan. (*Dr. C. B. Kennerly*; Sm. no. 6368).	Salvin-Godman Coll.
m, n. ♂ ♀ ad. sk.	Mexico.	Purchased.
o, p. ♂ ♀ ad. st.	Mexico.	Purchased.
q. ♂ ad. sk.	W. Mexico.	Zoological Soc. [P.]. (Type of species.)

23. CARDINALIS.

Type.

Cardinalis, *Bp. P. Z. S.* 1837, p. 111 ..... C. cardinalis.



a. *b.*

a. Skull of *Cardinalis cardinalis*, from above. *b.* Ditto, lateral view.

Range. United States generally to Mexico, Tres Marias Islands, Yucatan and neighbouring islands, British Honduras, reappearing in Venezuela and Trinidad.

Key to the Species.

Males. [pp. 161–166.

a. Bill red; lores and throat black ..... *cardinalis* and allies,

b. Bill blackish; lores red; chin only black .. *phœniceus*, p. 166.

Females.

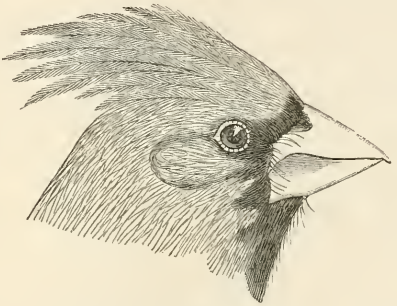
c. Bill red.

a'. A black mark on the face; throat black or dusky, as well as the lores.

a''. Facial mark dusky blackish or ashy black ..... *cardinalis*, p. 161.

b''. Facial mask entirely black		*coccineus*, p. 163.
b'. No black mask on the face; lores and chin ashy whitish		*igneus*, p. 164. *superbus*, p. 165.
d. Bill blackish horn-colour		*phœniceus*, p. 166.

The red Cardinals offer an instance, not very common among birds, of a genus wherein the males are all nearly alike, and the specific characters depend upon the female sex. The ordinary species of America, *C. cardinalis*, is the typical form, and the others can hardly be considered worthy of more than subspecific rank, as in the males the difference consists in intensity of colour and a slight variation in size. Those from more tropical localities appear to want the grey margins to the feathers, which are always observable in *C. cardinalis*, according to American writers, though I



Head of *Cardinalis cardinalis*.

suspect that they are entirely lost in summer, when the feathers become abraded, and it is then that an exact comparison of the males should be made. There can be no question, however, about the difference of the females, as set forth in the "Key."

1. Cardinalis cardinalis.

The Red Bird, *Catesby, Nat. Hist. Carol.* i. pl. 38 (1731).
The Red Grosbeak, *Albin, Nat. Hist. B.* i. p. 55, pl. 57 (1738).
The Hen Grosbeak from Virginia, *Albin, N. H. B.* iii. p. 57, pl. 61 (1740).
Le Grosbec de Virginie dit vulgairement le Cardinal hupé, *Briss. Orn.* iii. p. 253 (1760); *Daubent. Pl. Enl.* iv. pl. 37.
Loxia cardinalis, *Linn. Syst. Nat.* i. p. 300 (1766); *Gm. Syst. Nat.* i. p. 847 (1788); *Wils. Amer. Orn.* ii. p. 38, pl. xi. figs. 1, 2 (1810).
Loxia rubra, *Scop. Ann.* i. p. 139 (1769).
Le Cardinal hupé, *Buff. Hist. Nat. Ois.* iii. p. 458 (1775).
Cardinal Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 118 (1783).

Coccothraustes cardinalis, *Vieill. N. Dict. d'Hist. Nat.* xiii. p. 526 (1817).

Fringilla (Coccothraustes) cardinalis, *Bp. Obs. Wils.* no. 79 (1825, *teste Coues*).

Fringilla cardinalis, *Bp. Syn.* p. 113 (1828); *Audub. B. Amer.* pl. 159; *id. Orn. Biogr.* ii. p. 336 (1834).

Guarica cardinalis, *Jard. ed. Wils. Amer. Orn.* i. p. 188, pl. xi. figs. 1, 2 (1832).

Cardinalis virginianus, *Bp. P. Z. S.* 1837, p. 111; *id. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Gray, Gen. B.* ii. p. 358 (1844); *Bp. Consp.* i. p. 501 (1850); *Scl. P. Z. S.* 1856, p. 302; *Baird, B. N. Amer.* p. 509 (1858); *Newcied, J. f. O.* 1858, p. 268; *Baird, Mex. Bound. Surv., Birds*, ii. p. 17 (1859); *Scl. P. Z. S.* 1859, pp. 365, 378; *id. Cat. Amer. B.* p. 100 (1862, pt.); *Dresser, Ibis*, 1865, p. 491; *Baird, Ibis*, 1867, p. 289; *Dugès, La Nat.* i. p. 139 (1868); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Cooper, B. Calif.* p. 239, cum fig. (1870); *Gray, Hand-l. B.* ii. p. 102, no. 7531 (1870); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 178 (1872); *Coues, Key N. Amer. B.* p. 151 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873, pt.); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 100, pl. 30. figs. 6, 7 (1874); *Coues, B. N.-West*, p. 172 (1874); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 21, v. p. 394 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 129 (1878); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 26 (1881); *Coues, Check-list N. Amer. B.* p. 60 (1882); *Salv. Cat. Strickl. Coll.* p. 218 (1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 340 (1884, pt.); *Coues, Key N. Amer. B.* 2nd ed. p. 393 (1884).

Cardinalis cardinalis, *Licht. Nomencl. Av. Neotr.* p. 44 (1854); *A. O. U. List Amer. B.* p. 286 (1886); *Brewster, Auk*, iii. p. 110 (1886); *Fox, t. c.* p. 318.

Cardinalis ruber, *Stejneger, Auk*, i. p. 172 (1884).

Adult male in breeding-plumage. General colour above deep scarlet vermilion, or deep rosy-red, with more or less remains of ashy edges to the feathers; wing-coverts like the back; bastard-wing and primary-coverts dusky, externally pale rosy, particularly light towards the edge of the wing; quills dusky, externally rosy, paler towards the ends of the primaries; tail dark rosy or vermilion, the feathers edged internally with rosy; head strongly crested, deep vermilion, contrasting with the back; a distinct frontal line, lores, fore part of eyelid, feathers at gape and base of cheeks, as well as the chin and upper throat, black; remainder of under surface from the centre of the throat downwards rich vermilion, somewhat washed with rosy on the flanks; under wing-coverts and axillaries paler vermilion, with silky white bases; quills pale brown below, with the inner webs vermilion internally: "bill of a tint approaching coral-red; feet pale umber; iris dark hazel" (*Audubon*). Total length 8·8 inches, culmen 0·75, wing 3·75, tail 4·2, tarsus 0·9.

Adult female. Different from the male. General colour above dull ochreous brown, slightly paler on the lower back and rump; wing-coverts and quills dull vermilion, with ashy ochreous margins to the greater coverts and inner secondaries; tail-feathers dull vermilion, dusky at the ends, edged with ashy; crown of head dull ochreous brown, mottled with vermilion bases, the long crest-feathers

dull vermilion with ochreous tips; sides of face and ear-coverts also dull ochreous, the latter rather more ashy like the sides of the neck; lores dusky or ashy blackish, extending in a line across the base of the forehead, and downwards along the base of the cheeks on to the throat, which is also ashy blackish; remainder of the under surface of body ochreous buff, washed with vermilion, the centre of the abdomen dull white; thighs washed with vermilion; under tail-coverts ochreous buff; axillaries and under wing-coverts pale rosy vermilion; quills dusky below, pale vermilion along the inner web. Total length 8·5 inches, culmen 0·7, wing 3·6, tail 3·9, tarsus 1.

The pair of birds from Jalapa and a male from Eastern Mexico are rather smaller than North-American specimens, and have a much narrower frontal line of black; they are therefore intermediate between *C. cardinalis* and *C. igneus*. The male has the wing 3·4 inches compared with 3·6–3·8 inches as found in North-American specimens. I have included them under the race of *C. coccineus*.

Hab. Eastern United States, north to New Jersey and the Ohio Valley (casually further), west to the plains. (*A. O. U. Check-list.*)

a, b. ♂ ♀ ad. sk.	North America.	Lord Odo Russell [P.].
c, d. ♂ ♀ ad. sk.	Washington, D.C. (Sm. nos. 25266, 25303).	Salvin-Godman Coll.
e. ♀ ad. sk.	Virginia, Dec. 25 (*D. W. Scott*; Sm. no. 79328).	U.S. Nat. Museum [P.].
f. ♂ juv. sk.	Mount Carmel, Illinois, July 29, 1875 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Wheatland, Indiana, April 18 (*R. Ridgway*; Sm. no. 90316).	Salvin-Godman Coll.
h. ♂ ad. sk.	Knox Co., Indiana, April 21 (*R. Ridgway*; Sm. no. 82238).	U.S. Nat. Museum [P.].
i. ♂ ad. sk.	Indian Territory, Dec. 24, 1884.	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Kendall Co., Texas, Feb. 25 (*N. C. Brown*).	R. B. Sharpe, Esq. [P.].
l, m. ♂ ♀ ad. sk.	Florida.	W. B. Dismore, Esq. [P.].
n. ♂ ad. sk.	[N. America]*.	Sclater Coll.

Subsp. *α*. Cardinalis coccineus.

Cardinalis virginianus (*nec L.*), *Salv. Ibis*, 1860, p. 193; *Lawr. Ann. Lyc. N. Y.* ix. p. 201 (1868); *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873, pt.); *Boucard, P. Z. S.* 1883, p. 444; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 340 (1884).

Cardinalis virginianus, var. coccineus, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 299 (1874); *Coues, B. N.-West*, p. 172 (1874).

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* From Trinidad (*Lord Harris*: *Scl. Cat.* no. 591 b). Doubtless a caged bird.

Cardinalis ruber coccineus, *Stejneger, Auk*, i. p. 172 (1884).
Cardinalis saturatus, *Ridgw. Descr. new Sp. Cozumel*, Feb. 26, 1884, p. 4.
Cardinalis cardinalis saturatus, *Ridgw. Pr. U. S. Nat. Mus.* viii. p. 568 (1885).
Cardinalis cardinalis coccineus, *Ridgw. t. c.* p. 569 (1885).

Adult male. Similar to *C. cardinalis*, but smaller and rather deeper red, being of a rich rosy scarlet; the bill much stouter than in *C. virginianus*. Total length 7·5 inches, culmen 0·75, wing 3·4, tail 3·7, tarsus 0·9.

Adult female. Differs from the female of *C. cardinalis* in being smaller, and in having the mark and spot on the throat deep black as in the male. Total length 7 inches, culmen 0·7, wing 3, tail 3·35, tarsus 0·9.

The length of wing in male birds varies from 3·35–3·45 inches. Some of the specimens have remains of ashy edgings to the feathers of the back, being, as I believe, the marks of winter plumage.

Hab. Eastern Mexico, Mirador to Yucatan and British Honduras. I cannot separate the Cozumel birds from those of the mainland.

a, b. ♂ ♀ ad. sk.	Jalapa, Mexico (*de Oca*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Mexico.	J. Gould, Esq.
d. ♂ ad. sk.	Chable, N. Yucatan, Dec. 16 (*G. F. Gaumer*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Merida, N. Yucatan, May 7 (*G. F. Gaumer*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Merida, Feb. 1884 (*G. F. Gaumer*).	Sclater Coll.
h–o. ♂ ; *p.* ♀ ad. sk.	Cozumel Island, April (*G. F. Gaumer*).	Salvin-Godman Coll.
q. ♀ ad. sk.	Mugeres Island, Dec. 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.
r, s, t. ♂ ad. ; *u.* ♀ ad. sk.	Jolbox Island, Dec. 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.
v, w. ♂ : *x.* ♀ ad. sk.	Corosal, British Honduras (*Roe*).	Salvin-Godman Coll.
y, z. ♂ ad. sk.	Belize, British Honduras (*Blancancaux*).	Salvin-Godman Coll.

Subsp. β. Cardinalis igneus*.

Cardinalis igneus, *Baird, Proc. Philad. Acad.* 1859, p. 305; *Coues, op. cit.* 1868, p. 84; *Elliot, New and Unfig. Birds N. Amer.* pl. 4 (1869); *Cooper, B. Calif.* p. 238 (1870); *Gray, Hand-l. B.* ii. p. 102, no. 7532 (1870); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 341 (1884).

* The Arizona Cardinal has lately been separated by Mr. Ridgway as *Cardinalis superbus*, and it is said to be the form of Western Mexico also, *C. igneus* being confined to Lower California. The series in the British Museum is not sufficiently large to enable me to judge of the differences between these two forms.

Cardinalis virginianus (*nec L.*), *Scl. P. Z. S.* 1856, p. 302; *Finsch, Abhandl. nat. Ver. Brem.* 1870, p. 339; *Grayson, Proc. Bost. Soc. N. H.* xiv. p. 281 (1871).

Cardinalis virginianus, var. igneus, *Coues, Key N. Amer. B.* p. 151 (1872); *Lawr. Mem. Bost. Soc.* ii. p. 275 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. pp. 90, 103 (1874).

Cardinalis virginianus igneus, *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 26 (1881); *Belding, Pr. U. S. Nat. Mus.* v. p. 541 (1883), vi. p. 343 (1883); *Coues, Key N. Amer. B.* p. 394 (1884).

Cardinalis virginiana igneа, *Coues, Check-list N. Amer. B.* p. 60 (1882).

Cardinalis ruber igneus, *Stejneger, Auk*, i. p. 172 (1884).

Cardinalis cardinalis igneus, *Stejneger, Auk*, i. p. 171 (1804); *A. O. U. Check-list N. Amer. B.* p. 286 (1886).

Adult male. Similar to *C. virginianus*, but with a larger bill, and rather smaller in size; the black mask on the face not continued across the forehead. Total length 8 inches, culmen 0·7, wing 3·6, tail 4·1, tarsus 0·95.

The wing varies in a series from 3·4 to 3·6 inches, and the black line across the forehead is sometimes complete; and these specimens hold a somewhat intermediate position between *C. virginianus* and *C. igneus*. In birds from the Tres Marias Islands the bill, already longer than that of *C. virginianus*, attains to still greater dimensions.

Adult female. Ashy brown above, with an ochreous shade; wing-coverts dull vermilion, edged with ashy brown, the primary-coverts and quills dusky brown, externally washed with dull vermilion, the inner secondaries more completely ashy brown; tail-feathers dull red with ashy margins, and erossed with dusky bars under certain lights; head ashy ochreous, the long crest-feathers dull vermilion with ashy ochreous margins and blackish centres; lores paler ochreous; ear-coverts ashy ochreous, with whitish shaft-lines; under surface of body ochreous buffy whitish on the throat, and paler buff on the abdomen; thighs washed with vermilion; axillaries and under wing-coverts pale rosy vermilion; quills dusky below, pale vermilion along the inner web. Total length 7 inches, culmen 0·75, wing 3·5, tail 3·75, tarsus 1.

Hab. Lower California, probably throughout Western Mexico north of the Rio Grande to Santiago (*B., B., & R.*); Tres Marias Islands.

a. ♂ ad. sk.	North America.	Sclater Coll.
b. ♂ ad. sk.	San José, Lower California, April 20 (*L. Belding*; Sm. no. 87554).	Salvin-Godman Coll.

CARDINALIS SUPERBUS.

Cardinalis cardinalis superbus, *Ridgw. Auk*, iii. p. 334 (1886); *A. O. U. Check-list N. Amer. B.* p. 286 (1886).

"Similar to *C. cardinalis igneus*, but decidedly larger and the female more richly coloured" (*Ridgway*).

Full descriptions and measurements will be found in Mr. Ridgway's paper.

c. ♂ ad. sk.	San José, Nov. 13 (*J. Xantus*; Sm. no. 3360).	Salvin-Godman Coll.
d. ♂ ad. sk.	San José.	Capt. Kellett and Lieut. Wood [P.].
e. ♂ ad. sk.	California.	Capt. Kellett and Lieut. Wood [P.].
f. ♂ ad. sk.	Cape S. Lucas (*J. Xantus*; Sm. no. 530).	Sclater Coll.

a. Large-billed form.

a. ♂ ad. sk.	Tres Marias Islands, Feb. 26 (*A. Forrer*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Tres Marias Islands, Mar. 20 (*A. Forrer*).	Salvin-Godman Coll.

β. C. superbus.

a, b. ♂ juv. sk.	Camp Lowell, Arizona, Aug. 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
c. ♂ ad. sk.	Western Mexico.	G. Barclay, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Presidio, Mexico, June 2 (*A. Forrer*).	Salvin-Godman Coll.

Subsp. γ. Cardinalis carneus.

Coccothraustes (Cardinalis) carneus, *Less. Rev. Zool.* 1842, p. 210.
Cardinalis carneus, *Gray, Gen. B.* ii. p. 358 (1844); *Bp. Consp.* i. p. 501 (1850); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 341 (1884).
Cardinalis virginianus, var. carneus, *Coues, B. N.-West*, 1874, p. 172; *Lawr. Mem. Bost. Soc. N. H.* ii. p. 275 (1874); *Baird, Brewer, & Ridgw. B. N. Amer.* ii. p. 99 (1874); *Lawr. Bull. U. S. Nat. Mus.* no. 4, p. 20 (1876).
Cardinalis virginianus (*nec* L.), *Salvin, P. Z. S.* 1883, p. 421.
Cardinalis ruber carneus, *Stejneger, Auk*, i. p. 172 (1883).

Adult male. Similar to *C. igneus*, but of a much more rosy red, and without any indication of ashy margins to the dorsal plumage; the crest-feathers elongated and stiffened. Total length 7 inches, culmen 0·75, wing 3·2, tail 3·55, tarsus 0·85.

Female unknown.

Hab. Western Mexico, from Acapulco to the Colima district.

a. ♂ ad. sk.	Acapulco, Mexico, March (*A. H. Markham*).	Salvin-Godman Coll.

2. Cardinalis phœniceus.

Cardinalis phœniceus, *Bp. P. Z. S.* 1837, p. 111 (*ex Gould, MSS.*); *Gray, Gen. B.* ii. p. 358 (1844); *Bp. Consp.* i. p. 501 (1850); *Taylor, Ibis*, 1864, p. 83; *Scl. & Salv. P. Z. S.* 1868, p. 170, 1869, p. 251; *id. Exotic Orn.* pl. 63 (1868); *Gray, Hand-l. B.* ii. p. 102, no. 7533 (1870); *Finsch, P. Z. S.* 1870, p. 582; *Scl. & Salv. Nomencl. Av. Neotr.* p. 27 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 99 (1874).

Adult male. General colour above deep vermilion, rather clearer towards the rump and upper tail-coverts; lesser and median wing-coverts vermilion, rather brighter than the back, and having dusky bases: greater coverts, bastard-wing, primary-coverts, and quills dusky, externally rosy vermilion; tail deep vermilion, somewhat dusky towards the end, the feathers edged internally with pale rosy vermilion; crown of head scarlet vermilion, the long crest-feathers dusky at the ends; sides of face and under surface of body rich scarlet vermilion; lores and a narrow line above the nostrils along the base of the forehead, a small mark at the base of the cheeks, and the chin black; flank-feathers slightly mottled with silky white, the feathers with a subterminal bar of this colour; axillaries and under wing-coverts vermilion, with silky white bases; quills dusky below, pale rosy vermilion along the inner web; bill horny white in skin, blackish on the upper mandible and at the tip of the lower one: "iris reddish brown" (*A. Goering*). Total length 7 inches, culmen 0·75, wing 3·15, tail 3·1, tarsus 0·9.

Adult female. Different from the male. General colour above dingy ochreous brown, lighter ochreous on the lower back and rump; the whole upper surface washed with ashy; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills dusky, externally edged with ashy ochreous, and slightly tinged with dull vermilion; tail dull vermilion, dusky at tip, the feathers edged with ashy ochreous; crown of head and hind neck dull ashy, the crest-feathers dark vermilion, with blackish centres and dusky tips; lores, eyelid, feathers below the eye, and fore part of cheeks dull white; ear-coverts dull ashy; a malar spot and chin blackish; remainder of under surface ochreous buff, paler on the abdomen and more ashy on the throat; axillaries and under wing-coverts pale rosy, washed with ochreous; quills dusky below, pale rosy along the inner web. Total length 7 inches, culmen 0·7, wing 3·25, tail 3, tarsus 0·9.

Hab. Venezuela and Trinidad, Colombia.

a. ♂ ad. sk.	[Colombia.]	Sclater Coll.
b. ♀ ad. sk.	Carupano, Venezuela (*A. Goering*).	Sclater Coll.
c. ♂ ad. sk.	Carupano, Jan. 1867 (*A. Goering*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Venezuela.	J. Gould, Esq. (Type of species.)

Subfamily II. FRINGILLINÆ.

The woodcuts given above (p. 3) show the shape of the skull in the genus *Fringilla*; and it will be noticed that the posterior end of the lower jaw is very much weaker, and the nasal bones do not extend backwards as in the Grosbeaks, but only reach to the frontal line.

Although I have not been able to examine skulls of every genus contained in this subfamily, there is less doubt as to the position of the genera than was the case with the Grosbeaks, and the true Finches, as here arranged, seem to form a tolerably natural collection of genera. I have not hesitated to recognize colour as a characteristic of generic value where it has appeared to me to be useful in preserving seemingly natural genera, such as *Carduelis*, but it is possible that a larger compression of genera will take place with future writers.

Key to the Genera.

A. Bill rather long and slender; the exposed part of the culmen equal to twice the breadth at nostrils. [True Finches.]
  a. No scarlet about the head and face ..... 24. FRINGILLA, p. 170.
  b. Face scarlet or rosy.
    a'. No yellow on wings; throat and breast rosy or crimson; sexes different .... 25. PROCARDUELIS, [p. 182.
    b'. Yellow on wings; breast white; sexes alike ..... 26. CARDUELIS, p. 185.

B. Bill of various forms, swollen and globose, or thin and pointed, but the exposed part of the culmen never twice the breadth of the bill across the nostrils. [Siskins, Linnets.]
  c. Bill pointed, and not swollen or globose; the angles of the culmen and gonys about equal: nostrils completely hidden by bristles.
    c'. Bill rather long and attenuated, the sides proceeding in a straight line to the tip, which is very acute; the culmen as long as the hind toe and claw. 27. CHRYSOMITRIS, [p. 192.
    d'. Bill shorter, the culmen shorter than the hind toe and claw.
      a''. Wings short, falling short of the tip of the tail by more than the length of the tarsus.
        a'''. Hind claw rather small, much less than the hind toe itself; culmen flattened ..... 28. CALLACANTHIS †, [p. 232.
        b'''. Hind claw rather large, and about equal to the toe itself ..... 31. ACANTHIS, p. 235.
      b''. Wings long, falling short of the tail by less than the length of the tarsus. 32. MONTIFRINGILLA, [p. 257.
  d. Bill more or less swollen and globose, the lateral edge generally bowed in towards the tip; the culmen more gently curved

† Here must be inserted 29. *Loximitris* and 30. *Acanthidops*, which are supposed to be allied to *Chrysomitris* (vide *infrà*, pp. 233, 234).

towards the tip of the bill than the angle of the gonys, which is more abrupt.
e'. Wings long, falling short of the tail by less than the length of the tarsus. [Ground-Sparrows.]
c''. Nostrils hidden by bristles.
c'''. Bill stout, and like that of a Grosbeak.
*a*⁴. With a slight culminal ridge; the ascending angle of the gonys more marked and more abrupt than that of the culmen. [p. 280.
*a*⁵. With red on the wings..... 33. Rhodopechys,
*b*⁵. With no red on the wings.... 34. Rhynchostru-
*b*⁴. No culminal ridge; angles of the culmen and gonys about equal. [thus, p. 281. 35. Rhodospiza, p. 282.
d'''. Bill smaller and more swollen (Pyrrhuline); no culminal ridge. [p. 284. 36. Erythrospiza,
d''. Nostrils exposed ..... 37. Petronia, p. 288.
f'. Wings short, falling short of the tail by more than the length of the tarsus.
e''. Bill somewhat elongated, the maxilla rather deeper than the mandible. [Sparrows.]
e'''. Head uniform ..... 38. Passer, p. 298.
f'''. Head streaked ..... 39. Poliospiza, p. 342.
f'. Bill swollen, both mandibles strongly curved; the maxilla of about the same depth as the mandible.
g'''. Bill stout, not half the length of the head.
*c*⁴. With chestnut back ..... 40. Alario, p. 346.
*d*⁴. With yellow in the plumage.
*c*⁵. Tomium deflected towards the gape ..... 41. Serinus, p. 348.
*d*⁵. Tomium straight for its whole length ..... 42. Sycalis, p. 376.
*e*⁴. Plumage black, with yellow shoulder ..... 43. Pyrrhoplectes, [p. 386.
*f*⁴. With rosy or scarlet in the plumage ..... 44. Carpodacus, p. 387.
h'''. Bill elongated, more than half the length of the head ..... 45. Pyrrhospiza, [p. 431.
C. With both mandibles crossed; wings very long, and reaching nearly to the end of tail. 46. Loxia, p. 435.
D. With the bill very much swollen and evenly rounded; the breadth of the bill across the nostrils equalled by the length of the exposed portion of the culmen. [Bullfinches.]
e. Wing longer than tail.
g'. With the nostrils completely hidden by bristly plumelets; the bill scarcely bowed laterally towards the tip..... 47. Pyrrhula, p. 445.
h'. With the nostrils as in *Pyrrhula*, but the bill more distinctly bowed inwards laterally towards the tip..... 48. Pinicola, p. 459.
i'. With the nasal orifice very tiny, but exposed beyond the nasal plumelets.. [p. 462. 49. Propyrrhula,
f. Tail longer than the wing..... 50. Uragus, p. 464.

24. FRINGILLA.

	Type.
Fringilla, *Linn. Syst. Nat.* (xii.) i. p. 318 (1766)	F. cœlebs.
Cœlebs, *Cuv. Leçons Anat. Comp.* tabl. ii. (1800).....	F. cœlebs.
Struthus, *Boie, Isis*, 1828, p. 323	F. cœlebs.

Range. Europe generally, with the countries bordering the Mediterranean to the south, eastwards to Western Siberia, Persia and Turkestan; Madeira; Canaries; Azores.

Key to the Species.

a. With no white on rump; no black spots on flanks.
  a'. Rump blue-grey like the back; underparts blue-grey, white on abdomen and under tail-coverts ..... *teydea*, p. 170.
  b'. Rump olive-green or olive-yellow.
    a''. Ear-coverts rufescent like the breast.
      a'''. Back rufous, contrasting with the grey head ..... *cœlebs*, p. 171.
      b'''. Back slaty blue, or slaty, washed with olive-yellow ..... *maderensis*, p. 175. / *moreleti*, p. 176. / *canariensis*, p. 177.
    b''. Ear-coverts grey like the head ..... *spodiogenys*, p. 177.
b. With a white rump; flanks spotted with black *montifringilla*, p. 178.

1. Fringilla teydea.

Fringilla teydea, *Webb & Berth. Orn. Canar.* p. 20, pl. i. figs. 1, 2 (1836–44); *Bp. Consp.* i. p. 507 (1850); *Bolle, J. f. O.* 1854, p. 456, 1857, p. 312; *E. Newt. Ibis*, 1863, p. 188; *Gray, Hand-l. B.* ii. p. 80, no. 7170 (1870); *Godman, Ibis*, 1872, p. 210; *Dresser, B. Eur.* iv. p. 25, pl. 185 (1873).
Passer teydea, *Gray, Gen. B.* ii. p. 373 (1849).

Adult male in summer plumage. Above leaden blue; lesser wing-coverts like the back; median coverts blackish, with broad tips of bluish white; greater coverts blackish, externally leaden blue, inclining to bluish white at the ends; bastard-wing, primary-coverts, and quills blackish, edged with leaden blue, paler on the primaries, the fourth, fifth, and sixth having a tiny white spot at the base of the outer web, forming an alar speculum; upper tail-coverts like the back; tail-feathers blackish, edged with leaden blue, broader on the centre ones, the two outer ones fringed with white along the tip of the inner web, which has an ashy wedge-shaped mark near the end; crown of head and sides of face leaden blue, with a tiny white spot on the upper and under eyelid; under surface of body paler than the upper, being pale bluish grey, with the centre of the abdomen and under tail-coverts white; thighs blue-grey; axillaries and under wing-coverts bluish grey, the lower coverts edged with white; quills dusky below, ashy along the inner web: "upper mandible clear horn-colour, varied with greyish white at the base; lower mandible almost entirely white; feet horn-colour" (*Webb and Berthelot*). Total length 7 inches, culmen 0·7, wing 3·95, tail 3·15, tarsus 0·9.

The *male in seasonal plumage* is much duller than in summer, all the feathers being obscured with ashy brown, the tips to the greater and median wing-coverts being white instead of bluish white; the margins of the inner secondaries are also tinged with olive. The full plumage appears to be gained by the shedding of the brownish tips to the grey feathers and by the *moulting* of the wing-coverts.

Adult female. Differs from the male in being olive-brown instead of blue; the margins of the wing-coverts and quills olive, greyish on the edge of the primaries, the median coverts tipped with greyish white, the greater coverts also greyish white at the ends; upper tail-coverts ashy; tail-feathers dusky, with ashy margins; head like the back; sides of face and under surface of body pale ashy grey, washed with brown on the throat and ear-coverts; abdomen and under tail-coverts white; lores ashy whitish; a white spot on the upper and under edge of eyelid: "bill horn-colour, the lower mandible paler than the upper; feet as in the male" (*Webb and Berthelot*). Total length 6·2 inches, culmen 0·7, wing 3·5, tail 2·9, tarsus 0·9.

Hab. Canary Islands.

a, b, c. ♂ ad.; *d, e.* ♀ ad. sk.	Pinal de la Guanche, Teneriffe, April 25 (*F. D. G.*).	Salvin-Godman Coll.
f, g. ♂ ad.; *h.* ♀ ad. sk.	Villa Flora, Teneriffe, May 6 (*F. D. G.*).	Salvin-Godman Coll.

2. Fringilla cœlebs.

The Chaffinch, *Albin, Nat. Hist. B.* i. p. 60, pl. 63 (1738); *Penn. Brit. Zool.* p. 108, pl. 108. figs. 2, 3 (1766); *Lath. Gen. Syn.* ii. pt. 1, p. 257 (1783).

Le Pinçon, *Briss. Orn.* iii. p. 148 (1760); *Daubent. Pl. Enl.* iv. pl. 54. fig. 1.

Fringilla cœlebs, *Linn. Syst. Nat.* i. p. 318 (1766); *Koch, Syst. baier. Zool.* p. 215 (1816); *Temm. Man. d'Orn.* p. 359 (1820); *Roux, Orn. Prov.* pls. 85, 86 (1825); *Naum. Vög. Deutschl.* v. pl. 118 (1826); *Werner, Atlas, Granivores*, pl. 44 (1827); *Ménétr. Cat. Rais. Cauc.* p. 42 (1832); *Strickl. P. Z. S.* 1836, p. 100; *Gould, B. Eur.* iii. pl. 187 (1837); *Macgill. Hist. Brit. B.* i. p. 329 (1837); *Bp. Comp. List B. Eur. & N. Am.* p. 31 (1838); *Crespon, Orn. Gard*, p. 251 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 179 (1840); *Keys. u. Blas. Wirb. Eur.* p. xlii (1840); *Selys-Longch. Faun. Belge*, p. 74 (1842); *Yarr. Brit. B.* i. p. 460 (1843); *Schl. Rev. Crit.* p. lxi (1844); *Hewits. Eggs Brit. B.* p. 149, pl. 41. fig. 1 (1846); *Gray, Gen. B.* ii. p. 371 (1849); *Thomps. B. Irel.* p. 246 (1849); *Bp. Consp.* i. p. 507 (1850); *Kjærb. Dann. Fugle*, pl. 26. fig. 3, *Suppl.* 10. fig. 1 (1852); *Schl. Vog. Nederl.* pls. 164, 165 (1854); *Sundev. Sv. Fogl.* pl. iv. figs. 5, 6 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 132 (1859); *Tristr. Ibis*, 1859, p. 33, 1860, p. 137; *Linderm. Vög. Griechenl.* p. 62 (1860); *Schl. Dier. Nederl.* pl. 16. figs. 7, 8 (1861); *Gould, B. Gt. Br.* iii. pl. 34 (c. 1862); *Wright, Ibis*, 1864, p. 54; *Sperling, t. c.* p. 281; *Gray, List Br. B.* p. 94 (1863); *More, Ibis*, 1865, p. 126; *Filippi, Viagg.*

Pers. p. 349 (1865); *Bettoni, Ucc. Nidif. Lomb.* i. pl. 11 (1865); *Lilford, Ibis*, 1866, p. 177; *Degl. et Gerbe, Orn. Eur.* i. p. 271 (1867); *Tristr. Ibis*, 1867, p. 369; *Loche, Expl. Sci. Algér., Ois.* i. p. 143 (1867); *Borggr. Vogelf. Norddeutschl.* p. 77 (1869); *Doderl. Avif. Sicil.* p. 80 (1869); *Kenlem. Onze Vog.* i. pl. 32 (1869); *Gray, Hand-l. B.* ii. p. 87, no. 7281 (1870); *Fritsch, Vög. Eur.* tab. 26. figs. 10, 11 (1870); *Wyatt, Ibis*, 1870, p. 16; *Elwes & Buckley, Ibis*, 1870, p. 193; *Salvad. Faun. Ital., Ucc.* p. 150 (1871); *R. Gray, B. West Scotl.* p. 134 (1871); *Saunders, Ibis*, 1871, p. 219; *Harting, Handb. Brit. B.* p. 27 (1872); *Shelley, B. Egypt*, p. 151 (1872); *Alst. & Harvie Brown, Ibis*, 1873, p. 64; *Brooke, t. c.* p. 247; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dresser, B. Eur.* iv. p. 3, pl. 182 (1873); *Irby, B. Gibr.* p. 118 (1875); *Fallon, Ois. Belg.* p. 101 (1875); *Lilford, Ibis*, 1875, p. 10; *Dresser, t. c.* p. 242; *Danf. & Harvie Brown, t. c.* p. 412; *Wharton, Ibis*, 1876, p. 24; *Newt. ed. Yarr. Brit. B.* ii. p. 68 (1876); *Blanf. East. Pers.* ii. p. 247 (1876); *Danf. Ibis*, 1878, p. 22; *Bogd. B. Cauc.* p. 61 (1879); *Finsch, Reis. West-Sibir.* p. 93 (1879); *Salvin, Cat. Strickl. Coll.* p. 207 (1882); *Seebohm, Ibis*, 1882, pp. 218, 378; *Dixon, t. c.* p. 574; *B. O. U. List Brit. B.* p. 52 (1883); *Giglioli, Avif. Ital.* fasc. 24 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, p. 89 (1883); *Booth, Rough Notes*, pt. v. (1883); *Seebohm, Ibis*, 1883, p. 9; *Irby, t. c.* p. 183; *Clarke, Ibis*, 1884, p. 143; *Saunders, t. c.* p. 376; *Seebohm, Hist. Brit. B.* ii. p. 100, pl. 13 (1884); *Tristr. Faun. & Flor. Palest.* p. 69 (1884); *Radde, Orn. Cauc.* p. 174 (1884); *Whitehead, Ibis*, 1885, p. 40; *Giglioli, Avif. Ital.* p. 20 (1886); *Salvad. Elench. Orn. Ital.* p. 171 (1887).

Fringilla nobilis, *Schrank, Fauna Boica*, p. 176 (1798).

Passer spiza, *Pall. Zoogr. Rosso-Asiat.* ii. p. 17 (1811).

Struthus cœlebs, *Boie, Isis*, 1828, p. 323.

Fringilla hortensis, *Brehm, Vög. Deutschl.* p. 272 (1831).

Fringilla alpestris, *Brehm, Naum.* 1855, p. 277.

Fringilla minor, *Brehm, t. c.* p. 277.

Adult male. General colour above chestnut-brown on the mantle, back, and scapulars, the feathers with greyish bases; lesser wing-coverts white, grey along the edge of the wing; median coverts white; greater coverts black, tipped with white; bastard-wing and primary-coverts black, edged with ashy; quills black, margined with pale olive-yellow, the inner primaries white at the base, forming a speculum; the secondaries white at the base, forming a band with the white tips to the greater coverts; the innermost secondaries edged with light brown; lower back and rump olive-green; upper tail-coverts and two centre tail-feathers ashy grey, the remainder black, with a large wedge-shaped mark of white on the inner web of the penultimate one; this mark more extended on the outermost feather, which has also the basal half of the outer web white; crown of head, nape, and hind neck slaty blue, paler on the two latter, with a black band across the forehead; sides of neck slaty blue like the head; eyebrow, lores, eyelid, ear-coverts, sides of face, and cheeks pale vinous red, clearer on the centre of the breast and abdomen; the lower abdomen, thighs, and under tail-coverts white, the latter washed with vinous near the vent; sides of upper breast ashy grey; axillaries yellowish white, with ashy bases; quills dusky below, whitish along the inner web; bill leaden blue; legs

brown; iris hazel. Total length 6 inches, culmen 0·45, wing 3·5, tail 2·5, tarsus 0·65.

Adult male in winter plumage. Differs from the summer plumage in having the whole of the feathers obscured by edgings of sandy buff on the under surface, head, and neck, whereby the rufous tints are rendered duller and the grey of the head and neck hidden, though the colour can always be traced on lifting the feathers; the mantle and back are washed with olive; and the wing-bar formed by the tips of the greater coverts is olive-yellow. By the shedding of the tips of the feathers all over the body the summer plumage is gained. The bill is paler in the winter, being pinkish with a dark tip.

Obs. Two distinct shades of rufous are generally visible on the under surface in the breeding-plumage of the male bird, the throat and breast being deep rufous and the back and flanks vinous. Sometimes the birds are altogether pale vinous and sometimes pale salmon-rufous below; while occasionally examples are found which may be described as vinous-chestnut on the under surface. In the series obtained at Avington in November all these varied styles of plumage are represented; and there seems to be no way of accounting for the differences in tint in the males beyond the fact of individual variation, for they exist both in summer and winter plumage, and cannot apparently be put down to the score of age.

Adult female in breeding-plumage. Different from the male. General colour above ashy brown, washed with olive-yellow, the lower back and rump yellowish green; lesser wing-coverts ashy grey shaded with brown; median coverts white; greater series black, edged with olive and tipped with yellowish white; bastard-wing, primary-coverts, and quills blackish, edged with olive-yellow, brighter on the primaries, which are greyish towards the ends of the outer web, the inner secondaries browner externally; upper tail-coverts and centre tail-feathers ashy brown washed with olive-yellow: remainder of the tail-feathers blackish, edged with ashy olive, the two outer ones marked with white as in the male; crown of head ashy brown in the centre, with a broad band of brown along each side extending to the nape and behind the ear-coverts; eyebrow ashy brown, widening out towards the nape, fulvescent on the eyelid and below the eye; ear-coverts ochreous brown, with pale shaft-streaks; sides of neck ashy brown; cheeks and under surface of body pale ashy brown, lighter on the throat, and slightly tinged with pink on the throat and breast; abdomen and under tail-coverts white, the latter washed with fulvous; on the sides of the breast and flanks a tinge of olive-yellow; axillaries and under wing-coverts white, the former tinged with yellow; quills dusky below, whitish along the inner web. Total length 6·5 inches, culmen 0·5, wing 3·4, tail 2·6, tarsus 0·65.

The *winter plumage of the adult female* only differs from the summer plumage in being much browner and in having the white of the wing washed with olive-yellow; the under surface of the body is also browner, causing the white of the throat and abdomen to appear in greater contrast.

Some female birds have a white spot on the fore neck, and many have a good deal of pink on the under surface, but there is little variation in colour in a series.

Nestlings resemble the old female, but are more dingy in colour; the centre of the crown is greyer, and there is a more or less distinct spot of white on the nape and another behind the cheeks; the rump and upper tail-coverts are olive-brown.

Hab. Europe generally, as far east as Western Siberia, Persia, and Turkestan.

a. ♂ ad. sk.	England.	Gould Coll.
b. ♂ ad. sk.	Darlington, Yorkshire, Nov. 20.	Mrs. G. Maitland [P.].
c. ♂ ad. sk.	Hawkstone, Salop, Jan.	Gould Coll.
d. Var. sk.	Shropshire.	Dr. F. Day [P.].
e. ♀ ad. st.	Leicestershire.	Theodore Walker, Esq. [P.].
f, *g*. ♂ ♀ ad. sk.	Cambridgeshire, Jan. (*J. Baker*).	Salvin-Godman Coll.
h, *i*. ♂ ♀ ad. st.	Cambridgeshire, Jan.	J. Baker [C.].
k, *l*. ♀ ad.; *m*–*p*. Juv. st.	Norfolk.	Lord Walsingham [P.].
q. ♂ ad. pull. st.	Saffron Walden, Essex.	J. Clark, Esq. [P.].
r. ♂ ad. sk.	Maidenhead, Berks, May 12.	J. Gould, Esq.
s, *t*. ♀ ad. sk.	Cookham, Berks, Jan. 27.	R. B. Sharpe, Esq. [P.].
u, *v*. ♂ ad. sk.	Cookham, Berks, Feb. 23.	R. B. Sharpe, Esq. [P.].
w. Juv. sk.	Cookham, Berks, June.	Gould Coll.
w'. ♀ ad. sk.	Cookham, April 1885.	R. B. Sharpe, Esq. [P.].
x. ♂ ad. sk.	Godalming, Surrey, Jan. (*F. D. G.*).	Salvin-Godman Coll.
y. ♂ ad. sk.	Colgate, Sussex, Dec. 23.	R. B. Sharpe, Esq. [P.].
z. ♂ ad. st.	Lancing, Sussex.	R. B. Sharpe, Esq. [P.].
a'. ♂ ad. sk.	Lancing, Sussex, Mar. 26.	R. B. Sharpe, Esq. [P.].
b'. ♀ ad. sk.	Lancing, Sussex, April 6.	R. B. Sharpe, Esq. [P.].
c'. ♀ ad. sk.	Brighton, Oct. 20.	R. B. Sharpe, Esq. [P.].
d', *e'*, *f'*. ♂ ad. sk.	Avington, Hants, Nov.	E. Shelley, Esq. [P.].
g'–*k'*. ♂ ad. sk.	Avington, Hants, Nov.	R. B. Sharpe, Esq. [P.].
l', *m'*, *n'*. ♀ ad. sk.	Avington, Hants, Nov.	R. B. Sharpe, Esq. [P.].
o', *p'*. ♂ ♀ ad. sk.	Avington, Hants, May.	R. B. Sharpe, Esq. [P.].
q'. ♀ ad. sk.	Devonshire.	Montagu Coll.
r'. ♀ ad. sk.	S. Norway, June (*P. Godman*).	Salvin-Godman Coll.
s'. ♂ ad. sk.	Sarpsborg, Norway, June (*J. Baker*).	Salvin-Godman Coll.
t'. ♂ ad. sk.	Norway, May 21 (*R. Collett*).	Christiania Mus. [P.].
u'. ♂ ad. sk.	Norway, March 25 (*R. Collett*).	Christiania Mus. [P.].
v' ♂ ad.; *w'*. Juv. sk.	Stockholm, July 15 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
x'. ♂ ad. sk.	Belgium, July 1.	Brussels Museum [P.].
y', *z'*. ♂ ♀ ad. sk.	Havre, France, May (*V. Pluche*).	E. Hargitt, Esq. [P.].
a. ♂ ad. sk.	Havre, Oct. 31 (*V. Pluche*).	E. Hargitt, Esq. [P.].

β. ♂ ad. sk.	Seine-et-Oise, France (*F. Petit*).	E. Hargitt, Esq. [P.].
γ, δ. ♀ ad. sk.	Mongeron, Seine-et-Oise, Feb. 18.	R. B. Sharpe, Esq. [P.].
ε. ♀ ad. sk.	Seville, Spain, Dec. 9.	Howard Saunders, Esq. [P.].
ζ. ♂ ad. sk.	Valencia, Spain, Dec. 27.	Howard Saunders, Esq. [P.].
η. ♀ ad. sk.	Coimbra, Portugal, Nov.	Dr. L. Vieira [P.].
θ, ι. ♂ ad.; κ. ♀ ad. sk.	Malta, Feb.	Gould Coll.
λ. ♀ ad. sk.	Delta, Egypt, Jan. 14.	J. H. Gurney, Jun., Esq. [P.].
μ. ♂ ad. sk.	Mt. Carmel, Palestine.	Canon Tristram [C.].
ν. ♀ ad. sk.	Nazareth, Palestine.	Canon Tristram [C.].
ξ, ο. ♂ ♀ ad. sk.	Erzeroum.	Gould Coll.
π. ♂ ad. sk.	Anan, Mazendarán, N. Persia, Aug. 11.	W. T. Blanford, Esq. [C.].
ρ. ♂ ad. sk.	Shiraz, 5000 feet, Sept.	Sir O. St. John [C.].
σ. ♀ ad. sk.	Oak-forest near Shiraz, June.	Sir O. St. John [C.].
τ. ♀ ad. sk.	Karij valley, Elburz mountains, Aug. 10, 1872 (*W. T. Blanford*).	Hume Coll.
υ. Skeleton, m.	England.	Purchased.
φ. Skull.	England.	J. Ray, Esq. [P.].
χ. Sternum.	England.	G. Ingall, Esq. [P.].
ψ, ω′, α′, β. Skulls.	S. Germany.	Dr. Günther.

3. Fringilla maderensis.

Adult male. General colour above dark slate-colour on the back and scapulars, the upper mantle and the lower back and rump olive-yellow: upper tail-coverts slaty grey; lesser wing-coverts glossy blue-black, those near the edge of the wing slaty grey; median wing-coverts white, forming a broad wing-bar; greater coverts black, tipped with white; bastard-wing and primary-coverts black; quills black, edged externally with olive-yellow, ashy towards the end of the primaries, the fourth, fifth, and sixth of which have a tiny white spot at the base of the outer web, forming a small alar speculum: centre tail-feathers ashy grey, the remainder black, the outermost edged with white near the base of the outer web, and having a large wedge-shaped mark of white at the end of the inner web, this mark less developed on the penultimate feather and reduced to a small spot at the end of the third; crown of head and hind neck dark slaty grey, the former glossy and having a distinct frontal band of black; lores and a streak over the eye, eyelid, sides of face, and ear-coverts pale fawn-colour, the ear-coverts tipped with grey like the adjoining sides of the neck; throat and chest pale fawn-colour, the breast and sides of the abdomen pale pinkish; sides of body and flanks slaty grey, darker on the sides of the upper breast; centre of abdomen, thighs, and under tail-coverts white; axillaries and under wing-coverts white with dusky bases; quills

dusky below, ashy whitish along the inner web. Total length 5·3 inches, culmen 0·6, wing 3·25, tail 2·85, tarsus 0·8.

The *winter plumage of the male* only differs from the summer plumage in the greater amount of olive-yellow on the upper surface, the whole of the back being dull olive-yellow; the colours below are not so pure, and the under tail-coverts are slightly washed with fulvous, and the grey flanks also washed with brown. The bill is pale brown, with the under mandible horn-colour, instead of being entirely blue.

Adult female. Different from the male. Above dark ashy olive, brighter greenish yellow on the lower back and rump; head duller ashy than the back, with a slight tinge of olive; lesser wing-coverts like the back; median coverts blackish, broadly tipped with white, forming a wing-bar; greater coverts blackish, edged with olive and tipped with white; bastard-wing and primary-coverts blackish, edged with ashy olive; quills blackish, edged with olive, the small speculum at the base of the primaries less distinct; tail as in the male; lores ashy whitish; eyelid whitish; sides of face and ear-coverts dull ashy brown; throat fulvous white; fore neck, breast, and sides of body ashy brown, the abdomen and under tail-coverts white; axillaries and under wing-coverts white, with dusky bases. Total length 5·5 inches, culmen 0·55, wing 3, tail 2·45, tarsus 0·8.

Hab. Madeira.

a, b, c. ♂ ad. sk.	Madeira, June 20 (*F. D. G.*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Madeira, winter (*Temple Godman*).	Salvin-Godman Coll.

Subsp. *a.* Fringilla moreleti.

Fringilla moreletti, *Pucher. Rev. et Mag. de Zool.* 1859, p. 412, pl. 16; *Morelet, Hist. Nat. Açores,* p. 84 (1860).
Fringilla moreleti, *Godman, Ibis,* 1866, p. 97.
Fringilla tintillon (*nec Webb & Berth.*), *Bocage, Jorn. Lisb.* i. p. 89 (1867); *Godman, Azores,* p. 26 (1870).
Fringilla canariensis, var. moreleti, *Drouet, Faun. Açor.* p. 117.

Adult male. Similar to *F. maderensis*, and having a black frontal band like that species, but without the pink on the lower breast, the under surface of the body resembling that of *F. canariensis.* Total length 6 inches, culmen 0·6, wing 3·2, tail 2·6, tarsus 0·8.

Adult female. Resembles the female of *F. canariensis*, and like that species is fulvescent below, not so ashy on the breast and sides of the body. Total length 5·8 inches, culmen 0·6, wing 3·1, tail 2·45, tarsus 0·8.

Hab. Azores.

a. ♂ ad. sk.	S. Michael's, Azores, March (*F. D. G.*).	Salvin-Godman Coll.
b. ♂; *c, d.* ♀ ad. sk.	S. Michael's, Azores, April (*F. D. G.*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Flores, Azores, May (*F. D. G.*).	Salvin-Godman Coll.

Subsp. β. Fringilla canariensis.

Fringilla canariensis, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 232 (1817)*; *Gray, Hand-l. B.* ii. p. 80, no. 7169 (1870).

Fringilla tintillon, *Webb & Berth. Orn. Canar.* p. 21, pl. 4. fig. 1 (1836–44); *Bp. Consp.* i. p. 507 (1850); *Bolle, J. f. O.* 1854, p. 457, 1857, p. 315; *Godman, Ibis*, 1872, p. 211; *Dresser, B. Eur.* iv. p. 9, pl. 183. fig. 1 (1873).

Adult male in summer plumage. Differs from *F. maderensis* in having the back dark slaty blue, the lower back and rump yellowish green, the crown glossy blue-black with no distinct frontal band; under surface of body pale salmon-rufous as well as the facial markings, the sides of the breast paler salmon-rufous but without the distinct pink tinge seen in *F. maderensis*. In winter plumage the back is evidently washed with olive-yellow, remains of which are seen in some spring-plumaged individuals. Total length 5·7 inches, culmen 0·65, wing 3·3, tail 2·9, tarsus 0·85.

Adult female. Similar to the female of *F. maderensis*, but rather more fulvous below and not so ashy. Total length 6 inches, culmen 0·6, wing 3, tail 2·5, tarsus 0·8.

Hab. Canary Islands.

a, b. ♂ ad.; *c, d.* ♀ ad. sk.	Orotava, Teneriffe, April (*F. D. G.*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Orotava, May (*F. D. G.*).	Salvin-Godman Coll.

4. Fringilla spodiogenys.

Fringilla spodiogenys, *Bp. Rev. Zool.* 1841, p. 146; *Gray, Gen. B.* ii. p. 371 (1849).

Fringilla africana, *Levaill. Expl. Algér.* pl. 7. figs. 1, 2 (1850).

Fringilla spodiogenia, *Bp. Consp.* i. p. 507 (1850); *Tristr. Ibis*, 1859, p. 159; *Salvin, t. c.* p. 313; *Tristr. Ibis*, 1860, p. 152; *Irby, B. Gibr.* p. 118 (1865); *Tyrwhitt Drake, Ibis*, 1867, p. 427; *Gray, Hand-l. B.* ii. p. 80, no. 7167 (1870); *Gurney, Ibis*, 1871, p. 293.

Fringilla spodiogena, *Degl. et Gerbe, Orn. Eur.* i. p. 273 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 146 (1867); *Dresser, B. Eur.* iv. p. 13, pl. 183. figs. 2, 3 (1873); *Dixon, Ibis*, 1882, p. 574; *Reid, Ibis*, 1885, p. 245.

Adult male. General colour above yellowish green, the lower back and rump being slightly greener than the mantle; upper tail-coverts grey; scapulars bluish grey: lesser wing-coverts black, edged with bluish grey, the lower ones white like the median coverts, which form a conspicuous shoulder-patch: greater coverts black, broadly tipped with white, forming a wing-bar; bastard-wing, primary-coverts, and quills black, the latter edged with pale yellow, the inner secondaries with white or brown on the innermost, the

* Not to be confounded with the Canary, *Crithagra canaria* (L.).

primaries margined with ashy towards the ends, the fourth and fifth primaries white at base of outer web, forming a tiny white speculum; centre tail-feathers ashy grey; remainder of the tail-feathers black, the two outer ones white along the base of the outer web and having a long wedge-shaped mark of white on the inner web, less developed on the penultimate feather and reduced to an irregular white mark on the third; crown of head slaty blue, with a broad frontal band of black; lores and eyelid also black, with a little white mark above the hinder part of the eye and on the lower eyelid; ear-coverts and sides of neck slaty blue like the head, the former washed with rufous; feathers below the eye, cheeks, and ear-coverts like the crown; under surface of body vinous pink, the sides of the body pale ashy grey; abdomen, thighs, and under tail-coverts white; axillaries and under wing-coverts white with ashy bases, the former with a faint tinge of yellow; quills dusky blackish, white along the inner web. Total length 6 inches, culmen 0·51, wing 3·4, tail 2·55, tarsus 0·7.

One Algerian specimen seems to be undoubtedly a hybrid between *F. cœlebs* and *F. spodiogenys*, as it combines the characters of the two forms of Chaffinch.

Hab. North-eastern Africa, from Tunis to Morocco.

a. ♂ ad. sk.	Algeria.	Gould Coll.
b. ♂ ad. st.	Algeria.	Purchased.
c. ♂ ad. sk.	Algiers, April 23 (*H. B. Tristram*).	Salvin-Godman Coll.
d. ♂ ad. sk.	El Djem, Tunis, March (*O. S.*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Tunis.	L. Fraser, Esq. [C.].

5. Fringilla montifringilla.

The Brambling, *Albin, Hist. Nat. B.* iii. p. 60, pl. 64 (1740); *Penn. Brit. Zool.* p. 108, pl. 108. fig. 4 (1766); *Lath. Gen. Syn.* ii. pt. 1, p. 261 (1783).

Le Chardonneret de Suède, *Briss. Orn.* iii. p. 63 (1760).

Le Pinçon d'Ardennes, *Briss. t. c.* p. 152 (1760); *Daubent. Pl. Enl.* iv. pl. 54. fig. 2.

Fringilla montifringilla, *Linn. Syst. Nat.* i. p. 318 (1766); *Koch, Syst. baier. Zool.* p. 217 (1816); *Temm. Man. d'Orn.* i. p. 360 (1820); *Roux, Orn. Prov.* pls. 87, 88 (1825); *Naum. Vög. Deutschl.* v. pl. 119 (1826); *Werner, Atlas, Granivores,* pl. 45 (1827); *Gould, B. Eur.* iii. pl. 188 (1837); *Macgill. Hist. Brit. B.* i. p. 335 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838); *Schl. u. Susem. Vög. Eur.* Taf. i. figs. 1, 2 (1839); *Crespon, Orn. Gard.* p. 253 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 179 (1840); *Selys-Longch. Faune Belge,* p. 73 (1842); *Yarr. Brit. B.* i. p. 465 (1843); *Schl. Rev. Crit.* p. lxi (1844); *Hewits. Eggs Brit. B.* i. p. 151, pl. 41. fig. 2 (1846); *Thomps. B. Irel.* i. p. 249 (1849); *Gray, Gen. B.* ii. p. 371 (1849); *Bp. Consp.* i. p. 507 (1850); *Middend. Reis. Sibir., Zool.* p. 153 (1851); *Kjærb. Dann. Fugle,* pl. xxvii. fig. 2, Suppl. pl. 10. fig. 4 (1852); *Schl. Vog. Nederl.* pl. 66 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* i. p. 491 (1854); *Sundev. Sv. Fogl.* pl. v. figs. 1, 2 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 135 (1859); *Schrenck, Reis. Amurl.*

p. 299 (1859); *Linderm. Vög. Griechenl.* p. 63 (1860); *Swinh. Ibis*, 1861, pp. 45, 335; *Schl. Dier. Nederl. Vogels*, pl. 16. figs. 9, 10 (1861); *F. & P. Godman, Ibis*, 1861, p. 84; *Gould, B. Gr. Brit.* iii. pl. 35 (1862); *Jerd. B. Ind.* ii. p. 412 (1863); *Gray, List Brit. B.* p. 94 (1863); *Radde, Reis. Sibir., Vög.* p. 192 (1863); *Wright, Ibis*, 1864, p. 54; *Swinh. t. c.* p. 423; *Giglioli, Ibis*, 1865, p. 57; *Degl. et Gerbe, Orn. Eur.* i. p. 274 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 142 (1867); *Whitely, Ibis*, 1867, p. 201; *Smith, Ibis*, 1868, p. 444; *Borggr. Vogelf. Norddeutschl.* p. 77 (1869); *Doderl. Avif. Sicil.* p. 80 (1869); *Elwes & Buckley, Ibis*, 1870, p. 193; *Fritsch, Vög. Eur.* Taf. 25. figs. 13, 14 (1870); *Gray, Hand-l. B.* ii. p. 80, no. 7168 (1870); *Saunders, Ibis*, 1871, p. 219; *Salvad. Faun. Ital., Uec.* p. 151 (1871); *Swinh. P. Z. S.* 1871, p. 385; *R. Gray, B. West Scotl.* p. 137 (1871); *Dresser, B. Eur.* iv. p. 15, pl. 184 (1871); *Harting, Handb. Brit. B.* p. 27 (1872); *Severtz. Turkest. Jevotn.* pp. 64, 116 (1873); *Alst. & Harvie Brown, Ibis*, 1873, p. 64; *Keul. Onze Vog.* ii. pl. 46 (1873); *Swinh. Ibis*, 1874, p. 160, 1875, p. 120; *Danf. & Harvie Brown, t. c.* p. 413; *Cordeaux, t. c.* p. 183; *Irby, B. Gibr.* p. 118 (1875); *Dresser, Ibis*, 1875, p. 241; *Fallon, Ois. Belg.* p. 102 (1875); *Seebohm & Harvie Brown, Ibis*, 1876, p. 116; *Newt. ed Yarr. Brit. B.* ii. p. 75 (1876); *Tacz. Bull. Soc. Zool. France*, i. p. 179 (1876); *Finsch, Ibis*, 1877, pp. 57, 64, 65; *Danf. Ibis*, 1878, p. 22; *Blakist. & Pryer, t. c.* p. 244; *Seebohm, t. c.* p. 335; *David & Oust. Ois. Chine*, p. 383 (1878); *Hume, Str. F.* 1878, p. 465, 1879, p. 108; *Bogd. B. Cauc.* p. 62 (1879); *Finsch, Reis. West-Sibir.* p. 93 (1879); *Biddulph, Ibis*, 1881, p. 87; *Scully, t. c.* p. 597; *Salvin, Cat. Strickl. Coll.* p. 207 (1882); *B. O. U. List Brit. B.* p. 52 (1883); *Booth, Rough Notes*, part v. (1883); *Homeyer & Tancré, MT. Orn. Ver. Wien*, p. 89 (1883); *Seebohm, Ibis*, 1883, p. 9; *Severtz. t. c.* p. 85; *Irby, t. c.* p. 183; *Seebohm, Hist. Brit. B.* ii. p. 96, pl. 13 (1884); *id. Ibis*, 1884, p. 266; *Saunders, t. c.* p. 376; *Blakist. Amended List B. Japan*, p. 17 (1884); *Radde, Orn. Cauc.* p. 173 (1884); *Giglioli, Avif. Ital.* p. 21 (1886).

Fringilla lulensis, *Linn. Syst. Nat.* p. 318 (1766).
Passer montifringilla, *Pall. Zoogr. Rosso-Asiat.* ii. p. 18 (1811).
Fringilla flammea, *Beseke, Vög. Kurl.* p. 79 (1821).
Struthus montifringilla, *Boie, Isis*, 1828, p. 323.
Fringilla septentrionalis, *Brehm, Vög. Deutschl.* p. 274 (1831).
Fringilla borealis, *Brehm, Naum.* 1855, p. 277.
Fringilla major, *Brehm, t. c.* p. 277.

Adult male in breeding-plumage. General colour above blue-black, with generally a few sandy margins to the feathers (remains of winter plumage); lower back and rump white in the centre, black on either side; scapulars and lesser wing-coverts pale orange-rufous; median coverts white; greater coverts black, broadly tipped with white, here and there washed with orange; bastard-wing and primary-coverts black; quills black, the primaries edged with pale yellow, whitish towards their ends, the inner ones white at the base, forming a speculum; the secondaries rather broadly edged with white towards their ends; upper tail-coverts black, tipped with ashy, the long ones more broadly; tail-feathers black, fringed with ashy, the centre ones broadly, the outer feather broadly white for more than half its outer web, the inner web with a slightly indi-

cated white mark and fringed with white near the tip; lores, sides of face, cheeks, and ear-coverts black; throat and breast pale orange-rufous; abdomen white, the sides of the body and flanks sandy buff, with rounded black spots; thighs white, posteriorly black; under tail-coverts white, orange-rufous near the vent; axillaries primrose-yellow; under wing-coverts white; quills dusky below, white along the inner web. Total length 6·2 inches, culmen 0·55, wing 3·5, tail 2·45, tarsus 0·75.

Adult male in winter plumage. Very different from the summer plumage, the back of the head obscured by sandy-rufous edges to the feathers, the sides of the neck and the hind neck with pale bluish grey, the dorsal feathers with dark sandy edgings; wings and tail much as in summer, but with more orange-rufous on the wing-coverts; orange-rufous of the throat and chest duller and more shaded with sandy buff; flanks more strongly washed with sandy buff and the rounded black spots smaller.

The summer plumage of the male is gradually assumed by the shedding of the sandy-coloured edges, and the bluish ashy of the hind neck and mantle remains as a spot behind the head, the feathers of these parts generally showing ashy-grey bases throughout the summer plumage.

Female. Different from the male and not nearly so black. Upper surface brown, mottled with greyish bases to the feathers; head brown like the back, with a lateral streak on each side of the crown extending to the sides of the hind neck and enclosing a nuchal spot of greyish white; lower back and rump white, with the same markings as in the male; scapulars and lesser wing-coverts pale orange-rufous with black bases; remainder of wings and tail as in male but browner; eyebrow pale ashy with a slight tinge of rufous; eyelid whitish; ear-coverts ashy brown tinged with grey, this being more distinct on the sides of the neck, the ear-coverts having a black band posteriorly joined to the black band on the side of the crown; cheeks brown, separated from the throat by a tolerably distinct malar line of black; remainder of under surface as in male, but the orange on throat and chest not nearly so rich. Total length 6·2 inches, culmen 0·5, wing 3·4, tail 2·3, tarsus 0·8.

Nestling. Recalls the plumage of the adult female, but more tinged with olive, the nape-patch well developed, and the rump-patch tinged with sulphur-yellow; under surface of body washed with pale sulphur-yellow, tinged with orange on fore neck, chest, and sides of body.

Young birds of both sexes after the first moult seem to me to be very similar, the males being a little blacker throughout and having the scapulars and wing-coverts more distinctly orange.

Hab. Europe and Northern Asia to Japan and North China, breeding in high latitudes and going south to winter; at the latter season found in North-western India.

a. ♀ ad. sk.	England.	Montagu Coll.
b. ♂ ad. sk.	Cornwall.	Montagu Coll.

c. ♂ ad. sk.	Devonshire.	Montagu Coll.
d. ♂ ad. sk.	Bisham, Bucks, Jan. 22.	R. B. Sharpe, Esq. [P.].
e. ♂ ad. st.	Epping Forest.	E. Doubleday, Esq. [P.].
f. ♂ ad. sk.	Middlesex (*O. Salvin*).	Salvin-Godman Coll.
g, h. ♂ ad. st.	Cookham, Berks, Dec. 1864.	Mr. W. Briggs [P.].
i. ♀ ad. sk.	Cookham, Berks, Feb. 2, 1880.	R. B. Sharpe, Esq. [P.].
k, l. ♂ ♀ ad. sk.	Maidenhead, Berks, March 3, 1885.	R. B. Sharpe, Esq. [P.].
m. ♀ juv. sk.	Brighton, Sussex, Nov.	R. B. Sharpe, Esq. [P.].
n. ♀ ad. sk.	Avington, Hants, Feb. 2, 1880.	R. B. Sharpe, Esq. [P.].
o. ♂ ad. sk.	Drinkstone Park, Suffolk, March 4.	T. Harcourt Powell, Esq. [P.].
p, q. ♂ ♀ ad. st.	Cambridgeshire.	J. Baker [C.].
r. Ad. sk.	Cambridge (*Percy Godman*).	Salvin-Godman Coll.
s, t. ♂ ad. sk.	Dovrefjeld, Norway, July 4.	Gould Coll.
u. ♂ ad. sk.	Norway, March 23 (*R. Collett*).	Christiania Museum.
v. ♀ ad. sk.	Norway, Oct. 3 (*R. Collett*).	Christiania Museum.
w. ♂ ad. sk.	Christiania, May 1 (*R. Collett*).	Christiania Museum.
x, y, z. ♂ ad. sk.	Bodö, Norway, May 14 (*P. Godman*)	Salvin-Godman Coll.
a', b'. ♀ ad. sk.	Bodö, Norway, June (*P. Godman*).	Salvin-Godman Coll.
c'. ♂ ad. sk.	Bodö, Norway, June (*F. Godman*).	Salvin-Godman Coll.
d', e'. ♂ ♀ ad. sk.	S. Norway, June (*J. Baker*).	Salvin-Godman Coll.
f'. Pull. sk.	S. Norway, July 2 (*J. Baker*).	Salvin-Godman Coll.
g'. ♂ ad. sk.	Tromsö, June 19 (*R. Collett*).	Christiania Museum.
h'. ♂ ad. sk.	Heligoland, May (*L. Gätke*).	R. B. Sharpe, Esq. [P.].
i'. ♂ ad. sk.	Havre, W. France, March 27 (*W. Pluche*).	E. Hargitt, Esq. [P.].
k'. ♂ ad. sk.	Belgium, Dec. 10.	Brussels Museum.
l', m'. ♂ ♀ ad. sk.	Turkey, Oct. (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
n'. ♀ ad. sk.	Erzeroum, Asia Minor (*Dickson & Ross*).	Gould Coll.
o'. ♀ ad. sk.	Persia.	Purchased.
p'. ♂ ad. sk.	Persia.	Gould Coll.
q'. ♂ ad. sk.	Sarai Gor, River Ob, July 10 (*Dr. Finsch*).	Geogr. Soc. Bremen.
r'. Juv. sk.	Above Obdorsk, Sept. 5 (*Dr. Finsch*).	Geogr. Soc. Bremen.
s'. ♂ ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
t'. ♂ ad. sk.	Afghanistan.	Gould Coll.
u', v'. ♂ ad.; *w', x'.* ♀ ad. sk.	Afghanistan (*Griffith*).	India Museum.
y'. ♂ ad. sk.	Kandahar, Jan. 8, 1880 (*Sir O. St. John*).	Hume Coll.
z'. ♂ ad. sk.	Gilgit, March 4, 1879 (*J. Biddulph*).	Hume Coll.
a. Ad. sk.	Abbotabad Valley, N.W. Punjab, March 9, 1883 (*Capt. H. H. Unwin*).	Hume Coll.

β, γ. ♂ ♀ ad. sk.	Hakodadi, Japan, Feb. 26.	H. Whitely [C.].
δ, ϵ. ♂ ♀ ad. sk.	Japan.	Gould Coll.
ζ. ♂ ad. sk.	Japan.	Zoological Society.
η. ♀ ad. sk.	Chusan (*Capt. Ince*).	Gould Coll.
θ. Sternum.	England.	T. Ingall, Esq.
ι. Sternum.	England.	J. Ray, Esq.
κ. Skull.	England.	J. Ray, Esq.
λ, μ. Skulls.	S. Germany.	Dr. Günther.
ν. Skeleton.	England.	Purchased.

25. PROCARDUELIS.

Type.

Procarduelis, *Hodgson, in Gray's Zool. Misc.* p. 84 (1844) ..... P. nipalensis.

Range. Himalaya Mountains, extending into Western China.

Key to the Species.

a. Head and back velvety blackish, washed with crimson, so that the crimson forehead and eyebrow stand out in strong contrast ..... *nipalensis*, p. 182.

b. Entire upper surface pale crimson, as well as the sides of the face, the forehead and eyebrow not in strong contrast ..... *rubescens*, p. 184.

1. Procarduelis nipalensis.

Carduelis nipalensis, *Hodgs. Asiatic Research.* xix. p. 157 (1836).

Procarduelis nipalensis, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 303. figs. 1, 2 (nos. 460, 461); *id. in Gray's Zool. Misc.* p. 84 (1844); *Blyth, J. A. S. Beng.* xiii. p. 954 (1844); *id. Cat. B. Mus. As. Soc.* p. 121 (1849); *id. J. A. S. Beng.* xxiii. p. 213 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 492 (1856); *Jerd. B. Ind.* ii. p. 405 (1863); *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871); *David & Oust. Ois. Chine*, p. 351 (1877); *Hume, Str. F.* 1879, p. 108; *Scully, t. c.* p. 336; *Brooks, t. c.* p. 488.

Linota saturata, *Blyth, J. A. S. Beng.* xi. p. 193 (1842), xii. p. 985 (1843).

Linota fusca, *Blyth, J. A. S. Beng.* xi. p. 193 (1842).

Fringilla nepalensis, *Gray, Gen. B.* iii. App. p. 371 (1849); *id. Hand-l. B.* ii. p. 81. no. 7175 (1870).

Pyrrha saturata (*ex Cab. MSS. in Mus. Berol.*), *Bp. & Schl. Monogr. Loxiens*, p. 23, pl. 29 (1850).

Pyrrha nipalensis, *Cab. in Ersch. u. Grueber, Enc.* 1st sect. vol. 50. p. 216 (1849); *Bp. Consp.* i. p. 529 (1850); *Licht. Nomencl. Av. Berol.* p. 47 (1854).

Adult male. General colour above sooty black, washed with deep vinous, the edges to the feathers being of the latter colour; the mantle rather darker, the feathers being blacker in the centre: wing-coverts like the back, the reddish edges a little more pronounced on the greater coverts; bastard-wing, primary-coverts, and quills blackish, narrowly edged with dull vinous, more ashy on the margins of the primaries, the inner secondaries more broadly edged like the greater coverts; upper tail-coverts like the rump; tail-feathers blackish brown, with dull reddish-brown margins; crown of head

sooty black, washed with deep vinous like the nape and hind neck; forehead and sincipnt deep vinous crimson; lores sooty blackish as well as the feathers round the eye; above the ear-coverts a broad band of rosy vinous; upper edge of ear-coverts and sides of neck like the back; feathers below the eye, cheeks, and greater part of ear-coverts rosy vinous, the throat deeper coloured and more vinous crimson; fore neck, chest, and breast sooty black, washed with deep vinous; abdomen deep rosy; sides of breast, sides of body, and flanks sooty brown, the latter washed with vinous; thighs brown; under tail-coverts pale rosy with dusky centres; under wing-coverts and axillaries sooty blackish, washed with vinous, especially on the edge of the wing; quills below dusky, ashy along the inner edge: "bill dusky, darker on the culmen and greyish at the base of the lower mandible; feet fleshy brown; toes a shade darker than the tarsi; claws horny brown; iris dark brown" (*J. Scully*). Total length 5·8 inches, culmen 0·45, wing 3·5, tail 2·35, tarsus 0·8.

Adult female. Different from the male. General colour above dark brown, with black centres to the feathers of the mantle and upper back, which are also slightly washed with dull ochreous brown on the margins; lesser wing-coverts like the back; median and greater coverts dark brown, edged with dull ochreous brown, paler at the ends of the outer webs and forming a double wing-bar; bastard-wing, primary-coverts, and quills dark brown, edged with ochreous brown, the inner secondaries paler ochreous near the end of the outer webs, like the greater coverts; rump and upper tail-coverts uniform brown, washed with ochreous brown; tail-feathers dark brown, with dull ochreous-brown margins; crown of head dusky brown, slightly washed with ochreous; lores, feathers round the eye, ear-coverts, cheeks, throat, and under surface of body dull brown, slightly washed with ochreous; the lower breast and abdomen paler and clearer whity brown; sides of body and flanks dull brown like the breast; thighs brown; under tail-coverts pale ochreous brown with dusky brown centres; under wing-coverts and axillaries dusky, edged with ochreous brown; quills below dusky, ashy along the inner edge: "bill dusky, the base of the lower mandible paler brownish; tarsi and toes dingy brownish fleshy, claws horny brown; iris dark brown" (*J. Scully*). Total length 5·5 inches, culmen 0·45, wing 3·3, tail 2·25, tarsus 0·8.

Young male. Resembles the old female, but is a little more reddish brown: "bill dusky, darker above and lighter at the base of the lower mandible" (*J. Scully*). Total length 6·3 inches, culmen 0·45, wing 3·4, tail 2·5, tarsus 0·85.

The Western specimens are much paler than those from Sikhim, not so black above, and not showing the same dusky patch on the chest, the fore neck being brown with a rosy wash. Some of the Nepal, and a few even of the Sikhim specimens are so intermediate that it is not possible to characterize the Western race even as a distinct subspecies.

Hab. Himalayas, from Cashmere to Bootan, extending into Moupin in Western China.

a. ♂ ad. sk.	Dhurmsala, Cashmere, April 1870 (*W. E. Brooks*).	Hume Coll.
b. ♀ ad. sk.	Dhurmsala, May 1870 (*W. E. Brooks*).	Hume Coll.
c. ♂ ad. sk.	Lutu, near Borenda Pass, June 14, 1847.	Gould Coll.
d. ♂ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
e, *f*. ♂ ad. sk.; *g*, *h*. ♀ ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
i, *k*. ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
l, *m*. ♂; *n*, *o*. ♀ ad.; *p*. ♂ juv. sk.	Sheopuri Ridge, Nepal Valley, Feb. 1878 (*J. Scully*).	Hume Coll.
q, *r*. ♂ ♀ ad. sk.	Ascent of Sheopuri, Feb. 1878 (*J. Scully*).	Hume Coll.
s, *t*. ♀ ad. sk.	Dolaka, Nepal, Aug. 1875 (*L. Mandelli*).	Hume Coll.
u. ♂ juv. sk.	Native Sikhim, Jan. 1875 (*L. Mandelli*).	Hume Coll.
v. ♀ ad. sk.	Native Sikhim, Feb. 1873 (*L. Mandelli*).	Hume Coll.
w. ♂ ad.; *x*, *y*, *z*. ♀ ad. sk.	Native Sikhim, March 1878 (*L. Mandelli*).	Hume Coll.
a'. ♀ ad. sk.	Native Sikhim, Aug. 1873 (*L. Mandelli*).	Hume Coll.
b', *c'*. ♂ ad.; *d'*. ♂ juv.; *e'*. ♀ ad. sk.	Sikhim, Jan. 1874 (*L. Mandelli*).	Hume Coll.
f', *g'*, *h'*. ♂ ad.: *i'*, *k'*. ♀ ad. sk.	Sikhim, Feb. 1874 (*L. Mandelli*).	Hume Coll.
l', *m'*, *n'*. ♂ ad.: *o'*, *p'*, *q'*. ♀ ad. sk.	Sikhim, March 1874 (*L. Mandelli*).	Hume Coll.
r', *s'*. ♂ ad. sk.	Sikhim, April 1874 (*L. Mandelli*).	Hume Coll.
t', *u'*, *v'*. ♂ ad. sk.	Sikhim, Dec. 1873 (*L. Mandelli*).	Hume Coll.
w', *x'*. ♂ ♀ ad. sk.	Interior of Sikhim, Aug. 1873 (*L. Mandelli*).	Hume Coll.
y', *z'*, *α*, *β*. ♂ ad. *γ δ*, *ε*, *ζ*, *η*. ♀ ad. sk.	Sikhim.	Hume Coll.
θ. ♂ ad. sk.	Darjiling, winter 1869–70 (*H. J. Elwes*).	Hume Coll.
ι–τ. ♂ ad. sk.; *υ–* ♀ ad. sk.	Darjiling, 1872.	Hume Coll.
β'. ♂ ad. sk.	Darjiling, Nov. 1869.	Hume Coll.
γ'. ♀ ad. sk.	Bootan (*Pemberton*).	India Museum.

2. Procarduelis rubescens.

Procarduelis rubescens, *Blanf. P. Z. S.* 1871, p. 694, pl. 74; *Hume*, *Str. F.* 1879, p. 108.
Procarduelis mandellii, *Hume*, *Str. F.* 1873, pp. 14, 318.

Adult male. General colour above dark vinous red, the mantle and scapulars with somewhat dusky bases; wing-coverts like the back; the greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with rhubarb-brown; upper tail-coverts like the back;

tail-feathers dusky brown, edged with dull red; crown of head rather brighter and more crimson; lores dusky; sides of face, feathers round eye, ear-coverts, cheeks, and under surface of body rosy crimson, the breast slightly varied with ashy bases to the feathers; abdomen ashy grey, whiter towards the vent; sides of body and flanks rosy crimson; thighs ashy; under tail-coverts ashy grey, edged with greyish white; under wing-coverts and axillaries ashy, washed with pale rosy; quills below dusky, the inner edge ashy. Total length 5 inches, culmen 0·5, wing 3·15, tail 2·1, tarsus 0·7.

Adult female. General colour above brown, washed with crimson, rather brighter on the lower back, rump, and upper tail-coverts; wing-coverts like the back, the greater coverts rather more ochreous at the ends; bastard-wing, primary-coverts, and quills dark brown, edged with lighter brown, slightly tinged with rosy on the primaries; tail-feathers dark brown, edged with lighter brown; crown of head like the back, with a slight rosy tinge; lores and feathers round eye ashy; ear-coverts dark brown, with ashy shaft-lines; cheeks, throat, and under surface of body brown, the centre of the breast ashy, whiter on the lower abdomen and vent; sides of body and flanks brown with a slight reddish tinge; thighs and under tail-coverts ashy, whitish at the ends; under wing-coverts and axillaries ashy, the latter edged with ochreous brown; quills below dusky, ashy along the inner edge. Total length 5 inches, culmen 0·5, wing 3, tail 2 1, tarsus 0·65.

Hab. Nepal and Sikhim.

a, b. ♂ ♀ ad. sk.	Darjiling, 1870.	Hume Coll.
c, d. ♂ ♀ ad. sk.	Darjiling. (Types of *P. mandellii*).	Hume Coll.
e, f. ♂; *g.* ♀ ad. sk.	Sikhim, Feb. 1871 (*L. Mandelli*).	Hume Coll.
h. ♂ ad. sk.	Dolaka, Nepal, Aug. 1875 (*L. Mandelli*).	Hume Coll.

26. CARDUELIS.

Type.
Carduelis, *Briss. Orn.* iii. p. 53 (1760) ..... C. carduelis.

Range. Europe generally, including the countries south of the Mediterranean and Madeira, eastwards to Central and Eastern Siberia, Persia, Turkestan, and the Himalaya Mountains.

Key to the Species.

a. Hinder crown and sides of neck black; face crimson; back ruddy brown as also the breast..... *carduelis*, p. 185.
b. No black on hinder crown and sides of neck; back ashy as also the breast ..... *caniceps*, p. 189.

1. Carduelis carduelis.

Le Chardonneret, *Briss. Orn.* iii. p. 53 (1760): *Daubent. Pl. Enl.* iv. pl. 4. fig. 1; *Montb. Hist. Nat. Ois.* iv. p. 187, pl. 10 (1778).
The Goldfinch, *Penn. Brit. Zool.* p. 108, pl. 108. figs. 1, 2 (1766).
Fringilla carduelis, *Linn. Syst. Nat.* i. p. 318 (1766); *Gm. Syst. Nat.*

i. p. 903 (1788); *Temm. Man. d'Orn.* i. p. 377 (1820); *Roux, Orn. Prov.* pls. 97, 98 (1825); *Naum. Vög. Deutschl.* v. pl. 124. figs. 1, 2 (1826); *Werner, Atlas, Granivores*, pl. 52 (1827); *Ménétr. Cat. rais. Cauc.* p. 43 (1832); *Crespon, Orn. Gard.* p. 263 (1840); *Keys. u. Blas. Wirb. Eur.* p. xli (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 186 (1840); *Selys-Longch. Faune Belge*, p. 71 (1842); *Yarrell, Brit. B.* i. p. 490 (1843); *Schl. Rev. Crit.* p. lxiii (1844); *Gray, Gen. B.* ii. p. 371 (1849); *Kjærb. Danm. Fugle*, pl. xxviii. *a.* fig. 21 (1852); *Schl. Vog. Nederl.* pl. 167 (1854); *Sundev. Svensk. Fogl.* pl. iv. figs. 1, 2 (1856); *Schl. Dier. Nederl.* pl. 16. figs. 11, 12 (1861); *Gray, List Brit. B.* p. 95 (1863); *Sperling, Ibis*, 1864, p. 280; *More, Ibis*, 1865, p. 128; *Borggr. Vogelf. Norddeutschl.* p. 75 (1869); *Keulem. Onze Vogels*, i. pl. 34 (1869); *Gray, Hand-l. B.* ii. p. 80, no. 7171 (1870); *Elwes & Buckley, Ibis*, 1870, p. 193; *Frivaldszky, Vög. Eur.* pl. 25. fig. 7 (c. 1870); *Harting, Handb. Brit. B.* p. 27 (1872); *Fallon, Ois. Belg.* i. p. 105 (1875); *Danf. & Harvie Brown, Ibis*, 1875, p. 413; *Seebohm, Hist. Brit. B.* ii. p. 87 (1884).

Emberiza carduelis, *Scop. Ann.* i. p. 144 (1769).

The Goldfinch, *Lath. Gen. Syn.* ii. pt. 1, p. 281 (1783).

Acanthis carduelis, *Bechst. Naturg. Deutschl.* 2nd ed. ii. p. 199 (1807); *Godman, Ibis*, 1872, p. 212.

Passer carduelis, *Pall. Zoogr. Rosso-Asiat.* ii. p. 15 (1821).

Spinus carduelis, *Koch, Syst. baier. Zool.* p. 233 (1816).

Carduelis cardnelis, *Isis*, 1822, p. 554; *Licht. Nomencl. Av.* p. 46 (1854).

Carduelis elegans, *Steph. in Shaw's Gen. Zool.* xiv. p. 30 (1826); *Gould, B. Eur.* iii. pl. 196 (1837); *Macgill. Brit. B.* i. p. 393 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *Hewits. Eggs Brit. B.* i. p. 161, pl. 44. fig. 1 (1846); *Thomps. B. Irel.* i. p. 261 (1849); *Bp. Consp.* i. p. 518 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 148 (1859); *Tristr. Ibis*, 1859, p. 34; *Salvin, t. c.* p. 313; *Powys, Ibis*, 1860, p. 138; *Wright, Ibis*, 1864, p. 54; *Filippi, Viagg. Pers.* p. 349 (1865); *Giglioli, Ibis*, 1865, p. 57; *Lilford, Ibis*, 1866, p. 176; *Drake, Ibis*, 1867, p. 427; *Loche, Expl. Sci. Algér., Ois.* i. p. 154 (1867); *Degl. et Gerbe, Orn. Eur.* i. p. 279 (1867); *Tristr. Ibis*, 1868, p. 206; *Smith, t. c.* p. 445; *Saunders, Ibis*, 1869, p. 172; *Heugl. Orn. N.O.-Afr.* i. p. 640 (1870); *Gould, B. Gt. Br.* iii. pl. 36 (c. 1870); *Bettoni, Ucc. Nidif. Lomb.* i. pl. 41 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 154 (1871); *Saunders, Ibis*, 1871, p. 220; *Gurney, t. c.* p. 293; *R. Gray, B. W. Scotl.* p. 144 (1871); *Godman, Ibis*, 1872, p. 212; *G. C. Taylor, t. c.* p. 230; *Shelley, B. Egypt*, p. 152 (1872); *Brooke, Ibis*, 1873, p. 47; *Irby, B. Gibr.* p. 122 (1875); *Dresser, Ibis*, 1875, p. 423; *Blanf. East. Persia*, ii. p. 249 (1876); *Bygrave Wharton, Ibis*, 1876, p. 25; *Newt. ed. Yarr. Brit. B.* ii. p. 117 (1876); *Dresser, B. Eur.* iii. p. 527, pl. 116 (1877); *Danf. Ibis*, 1878, p. 23; *Finsch, Verh. zool.-bot. Gesellsch. Wien*, xxix. p. 205 (1879); *Seebohm, Ibis*, 1882, p. 219; *Dixon, t. c.* p. 576; *B. O. U. List Brit. B.* p. 47 (1883); *Seebohm, Ibis*, 1883, p. 9; *Irby, t. c.* p. 183; *Homeyer & Tancré, MT. Orn. Ver. Wien*, 1883, p. 89; *Clarke, Ibis*, 1884, p. 142; *Saunders, t. c.* p. 375; *Tristr. Faun. & Flor. Palest.* p. 64 (1884); *Giglioli, Iconogr. Avif. Ital.* part 26 (1884); *Radde, Orn. Cauc.* p. 170 (1884); *Whitehead, Ibis*, 1885, p. 38; *Reid, t. c.* p. 245; *Giglioli, Avif. Ital.* p. 30 (1886).

Carduelis septentrionalis, *Brehm, Vög. Deutschl.* p. 288 (1831).

Carduelis germanica, *Brehm, t. c.* p. 289 (1831).

Carduelis aurata, *Eyton, Cat. Brit. B.* p. 20 (1836).
Carduelis communis, *Blyth, J. A. S. Beng.* xiv. p. 554 (1845).
Carduelis accedens, *Brehm, Naum.* 1855, p. 277.
Carduelis meridionalis, *Brehm, t. c.* p. 277.
Carduelis aurantiipennis, *Brehm, t. c.* p. 277.
Carduelis vulgaris, *Doderl. Avif. Sicil.* p. 81 (1869).
Carduelis europæus, *Severtz. Turkest. Jevotn.* p. 64 (1873).
Carduelis major, *Taez. P. Z. S.* 1879, p. 672; *Seebohm, Ibis*, 1882, pp. 424, 547; *id. P. Z. S.* 1882, p. 134.
Fringilla major, *Seebohm, Hist. Brit. B.* ii. p. 87 (1884).
Fringilla albigularis, *Madarász, Zeitschr. ges. Orn.* i. p. 145 (1884).
Carduelis albigularis, *Madarász, t. c.* pl. iii.

Adult male. General colour above pale chocolate-brown, lighter on the rump, the feathers of which have whitish bases; wing-coverts black, with obscure margins of pale brown; greater coverts golden yellow, the outer ones black externally, the inner ones pale ashy or fulvous, brown towards their ends; bastard-wing and primary-coverts black; quills black, tipped with white, the primaries golden yellow for the basal half of the outer web, the secondaries with golden-yellow bases, the inner secondaries tipped with pale fulvous brown like the innermost greater coverts; upper tail-coverts white, shaded with fulvous brown, the long ones with black bases; tail-feathers black, with a white spot at the end, diminishing in size towards the outer feathers, the two outer feathers with a large white patch on the inner web, reduced to a small spot of white on the third feather; crown of head black down the centre and descending on each side in a broad line behind the ear-coverts; nape whitish, separating the black crown from the back; forehead crimson, extending above the eye; lores and eyelid black; sides of crown, ear-coverts, and hinder cheeks white, descending to the lower throat; forepart of cheeks and upper throat crimson; fore neck pale fulvous brown; breast and abdomen white; sides of upper breast pale fulvous brown, like the sides of body and flanks; thighs whitish; under tail-coverts white, shaded with fulvous brown; under wing-coverts and axillaries white; quills below dusky, whitish along the inner edge. Total length 5·2 inches, culmen 0·55, wing 3·2, tail 1·85, tarsus 0·6.

Adult female. Similar to the male. Total length 4·7 inches, culmen 0·5, wing 2·95, tail 1·8, tarsus 0·55.

Young. Differs from the adults in wanting the red on the face, as well as the black of the crown and hind neck, the upper surface being brown with blackish or dusky tips to the feathers, producing a spotted appearance; wings as in the adult, excepting that the lesser and median wing-coverts are tipped with fulvous brown, and the greater series, instead of being golden yellow, are black tipped with creamy buff, washed with yellow; under surface of body white, washed with brown on the fore neck, breast, and sides of the body, all these parts being spotted with blackish.

Although the full plumage is gained after the first moult, the colours are scarcely so vivid as in the fully adult birds, and imma-

turity is always expressed by the greater coverts, which have more or less black at their bases. The white on the tail is also more reduced in size, and is always strictly confined to the two outer feathers. In old birds the third feather also has some white on the inner web; but this is not a constant character, and is sometimes developed on one side of the tail and not on the other.

The specimens from Teneriffe, collected by Mr. F. D. Godman, are very small, and have the white tips to the quills and tail-feathers nearly obsolete; but this is also somewhat due to the abrasion of the feathers during the breeding-season, though it can scarcely be developed at any time to the same extent as in the specimens from Europe. The single specimen procured by Mr. Godman in Madeira has a great deal of yellow on the sides of the breast, which looks like a variation in the direction of an incipient species.

The female specimen procured by Sir O. St. John near Shiraz has the head ashy brown mottled with black; and as it was obtained in summer, it looks as if this variation were due to interbreeding with *C. canicaps*.

As a rule English examples are more dingily coloured than those from continental Europe, and the white parts are never so pure.

Hab. Europe generally, except the extreme north. Canary Islands, Madeira, and the countries bordering the Mediterranean. A winter visitant to Egypt and Palestine. In Siberia it extends to Omsk and Krasnoyarsk and winters in Turkestan. The birds from Western Siberia are larger and whiter, but seem to me to constitute only a larger race (*C. major*, Tacz.), with which the Goldfinch from Russia will probably be found to be intermediate.

a. ♂ ad. sk.	Europe.	Gould Coll.
b. ♂ ad. sk.	Orkneys (*Dunn*).	R. B. Sharpe, Esq. [P.].
c, *d*. ♂ ♀ ad.; *e*, *f*, *g*. Pull. st.	Leicestershire.	Theodore Walker, Esq. [P.].
h. Ad.; *i*, *k*. Pull. st.	Cambridgeshire.	Mr. J. Baker [C.].
l. ♀ ad. sk.	Cambridgeshire (*J. Baker*).	Salvin-Godman Coll.
m. Ad. sk.	Cambridgeshire, Jan. 1866 (*J. Baker*).	Salvin-Godman Coll.
n. Juv. st.	Saffron Walden, Essex.	J. Clark, Esq. [P.].
o, *p*. ♂ ♀ ad.; *q*–*t*. Juv. st.	Norfolk, June.	Lord Walsingham [P.].
u. Var. mel.	London.	Dr. Leach [P.].
v, *w*. Ad. sk.	Hampstead, Nov. 18, 1869.	Hume Coll.
x. Ad.; *y*. Imm. sk.	Sydenham, May 1869.	Hume Coll.
z. ♂ ad. sk.	Surrey, Jan. 1857 (*F. D. G.*).	Salvin-Godman Coll.
a'. Var. sk.	Brighton.	Purchased.
b'. Juv. sk.	Brighton, Aug. 1882.	R. B. Sharpe, Esq. [P.].
c', *d'*. ♂ ♀ ad. sk.	Lancing, Sussex, Nov. 1883.	R. B. Sharpe, Esq. [P.].
e'. Juv. sk.	Shoreham, July 1884.	R. B. Sharpe, Esq. [P.].
f'. ♂ ad. sk.	Cookham, Berks, Dec. 28, 1874.	R. B. Sharpe, Esq. [P.].
g'. ♀ ad. sk.	Cookham, Berks, Nov. 17, 1869.	Hume Coll.

h'. Ad. st.	Cookham.	Mr. W. Briggs [P.].
i'. Ad. sk.	Avington, Hants, Nov. 25, 1872.	E. Shelley, Esq. [P.].
k'. Ad. sk.	Devonshire.	Montagu Coll.
l'. Ad.; *m'*. Pull. st.	Pembrokeshire, June.	Dr. Günther [P.].
n', *o'*. ♂ ♀ ad.; *p'*. ♀ juv.	Skåne, Sweden, Dec. 1873 (*W. Meres*).	R. B. Sharpe, Esq. [P.].
q', *r'*. ♂ ad. sk.	Havre, N. France, April 1873 (*V. Pluche*).	E. Hargitt, Esq. [P.].
s'. Ad. sk.	Belgium, Dec. 10, 1870.	Brussels Museum [P.].
t'. Ad. sk.	Portugal, Oct. 1886.	Dr. L. Vieira [P.].
u', *v'*. ♂ ad. sk.	Teneriffe, April 8, 1871 (*F. D. G.*).	Salvin-Godman Coll.
w'. Ad. sk.	Madeira, June 23, 1871 (*F. D. G.*).	Salvin-Godman Coll.
x', *y'*. ♂ ♀ ad. sk.	Smyrna, Dec. 20, 1876 (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
z'. ♂ ad. sk.	Tyre.	Canon Tristram [C.].
a. ♀ ad. sk.	Jericho.	Canon Tristram [C.].
β. Sternum.	England.	J. Ingall, Esq. [P.].
γ. Skeleton.	England.	Mr. J. Turner [P.].
δ. Skull.	England.	Purchased.
ϵ. Skull.	S. Germany.	Dr. Günther [C.].

α. C. major.

ζ, *η*. Ad. sk.	Persia.	Charles Darwin, Esq. [P.].
θ. ♂ ad. sk.	Near Shiraz, Persia, June 1869.	Sir O. St. John [C.].
ι. ♀ ad. sk.	Near Shiraz, Persia, June 1869 (*Sir O. St. John*).	Hume Coll.
κ. ♀ imm. [? hybrid] sk.	Shiraz, summer.	Sir O. St. John [C.].
λ. ♂ Juv. sk.	Shiraz, June 12, 1872.	W. T. Blanford, Esq. [C.].
μ, *ν*, *ξ*, *o*. Ad. st.	Krasnoyarsk, Siberia.	H. Seebohm, Esq. [P.].

β. Hybrids between *C. major* and *C. caniceps*.

π–*τ*. Ad. st.	Krasnoyarsk.	H. Seebohm, Esq. [P.].

γ. Hybrids between *C. carduelis* and *Linota cannabina*.

υ, *φ*. Ad. st.	England.	Purchased.

2. Carduelis caniceps.

Fringilla carduelis, var., *Pall. Zoogr. Rosso-Asiat.* ii. p. 16 (1811).
Carduelis caniceps, *Vigors, P. Z. S.* 1837, p. 23; *Gould, Cent. Himal. B.* pl. 33. fig. 1 (1832); *Royle, Ill. Bot. Himal.* i. pl. 8. fig. 2 (1839); *Blyth, J. A. S. Beng.* xii. p. 985 (1843), xiii. p. 955 (1844), xiv. p. 554 (1845); *Hutton, op. cit.* xvi. p. 779 (1847); *Blyth, Cat. B. Mus. As. Soc.* p. 124 (1849); *Bp. Consp.* i. p. 518 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 493 (1854); *Jerd. B. Ind.* ii. p. 408 (1873); *Pelz. Ibis*, 1868, p. 318; *Brooks, Str. F.*

1875, p. 255; *Hume, Str. F.* 1879, p. 108; *Finsch, Verh. zool.-bot. Gesellsch. Wien*, xxix. p. 205 (1879); *Wardlaw Ramsay, Ibis*, 1880, p. 67; *Bidd. Ibis*, 1881, p. 85; *Scully, t. c.* p. 578; *Salvin, Cat. Strickl. Coll.* p. 212 (1882); *C. Swinh. Ibis*, 1882, p. 115.

Fringilla orientalis, *Eversm. Addend. Pall. Zoogr.* p. 9 (1841); *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 80, no. 7172 (1870).

Fringilla caniceps, *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 80, no. 7173 (1870); *Finsch, Ibis*, 1877, p. 51.

Carduelis orientalis, *Bp. Consp.* i. p. 518 (1850); *Blasius, Ibis*, 1861, p. 295; *Severtz. Turkest. Jevotn.* pp. 64, 116 (1873); *Dresser, Ibis*, 1875, pp. 243, 387; *Tacz. Bull. Soc. Zool. France*, i. p. 180 (1879); *Gould, B. Asia*, v. pl. 17 (1877); *Seebohm, Ibis*, 1880, p. 187.

Carduelis major caniceps, *Seebohm, Ibis*, 1882, pp. 424, 547.

Adult male. General colour above ashy brown, the lower back mottled with ashy bases to the feathers, the rump greyish, the upper tail-coverts white with black bases; wing-coverts black, with a few remains of narrow brownish edges: greater coverts golden yellow, the outer ones black externally, the innermost black at base, ashy brown at the ends; bastard-wing and primary-coverts black; quills black, externally golden yellow for a considerable portion of the outer web, the inner secondaries white at the end of the outer web, the innermost white for nearly the whole extent of the latter; tail-feathers black, the four centre ones with a white spot at the tip, the outer feather white for the greater part of the inner web; crown of head ashy brown like the back, the forehead crimson; lores and eyelid black; ear-coverts ashy brown, hoary white above the eye and behind the red face, joining the throat; fore part of cheeks and chin crimson; remainder of throat whitish; fore neck, chest, sides of body, and flanks ashy brown; centre of breast and abdomen white; thighs ashy brown; under tail-coverts white; under wing-coverts and axillaries white, with a tinge of yellow near the edge of the wing; quills below dusky, ashy whitish along the inner edge. Total length 5·3 inches, culmen 0·55, wing 3·2, tail 1·95, tarsus 0·55.

Adult female. Only differs from the male in having the crimson on the face not quite so bright, and in having more black at the base of the yellow greater coverts. Total length 5·1 inches, culmen 0·55, wing 3·2, tail 1·9, tarsus 0·55.

Young. Like that of *C. elegans*, but may be recognized by the greater extent of white on the outer web of the inner secondaries.

A young specimen from Shiraz appears to be a hybrid, for the amount of white on the inner secondaries is intermediate between that of an English nestling and one from Cashmere. The female obtained by Sir O. St. John also appears to be intermediate; and thus we have a second point of contact in the ranges of the two Goldfinches, the other being in the neighbourhood of Krasnoyarsk, whence Mr. Seebohm has received several specimens, clearly hybrids (*cf.* Seebohm, P. Z. S. 1882, p. 134, and 'Ibis,' 1882, p. 424) between the Oriental Goldfinch and the large form of the European Goldfinch (*C. major*).

After the first moult the full plumage is attained; but immature birds have the yellow greater coverts with conspicuous black bases.

Hab. From Lake Baikal to Krasnoyarsk in Siberia. Probably South Persia, and thence eastwards to Turkestan and the North-western Himalayas.

a–c. Ad. st.	Krasnoyarsk, Siberia.	H. Seebohm, Esq. [P.].
d. Ad. sk.	Altai Mountains.	Gould Coll.
e. Ad. st.	Altai Mountains.	Purchased.
f. ♀ ad. sk.	Dschasyl Kul, Ala Tau, Turkestan, May 14 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
g. ♀ ad. sk.	Mountains on the Tschirtschik River, Western Tian-Schan range, Jan. 19, 1875 (*Dr. Severtzoff*).	India Museum.
h, i. ♂ ♀ ad. sk.	Tashkend, Oct. 18 (*Dr. Severtzoff*).	Gould Coll.
k. Ad. sk.	Cabul (*Dr. Griffith*).	India Museum.
l. ♂ ad. sk.	Candahar, Nov. 24, 1879 (*Sir O. St. John*).	Hume Coll.
m. ♂ ad. sk.	Candahar, Jan. 1, 1881.	Colonel Swinhoe [P.].
n, o. Ad. sk.	Quetta (*Dr. Griffith*).	India Museum.
q. Ad. sk.	Quetta, 5500 ft. (*O. T. Duke*).	Hume Coll.
r. ♀ ad. sk.	Sind Valley, Aug. 8, 1873 (*W. E. Brooks*).	Hume Coll.
s. Ad. sk.	Murdan, Punjab, Dec. 1870.	Hume Coll.
t. ♀ ad. sk.	Boonji, Nov. 1877 (*J. Biddulph*).	Hume Coll.
u. Jun. sk.	Gilgit, Nov. 25, 1879.	Dr. J. Scully [P.].
v. ♀ ad. sk.	Gilgit, Dec. 31, 1878 (*J. Biddulph*).	Hume Coll.
w. ♂ ad. sk.	Gilgit, Feb. 28, 1879 (*J. Biddulph*).	Hume Coll.
x. ♂ ad. sk.	Gilgit, March 28, 1879 (*J. Biddulph*).	Hume Coll.
y. ♂ ad. sk.	Gilgit, Jan. 8, 1879 (*J. Biddulph*).	Hume Coll.
z. ♂ ad. sk.	Astor district, June 2, 1876 (*J. Biddulph*).	Hume Coll.
a'. Ad. sk.	Cashmere, Aug. 1870.	Hume Coll.
b'. Juv. sk.	Cashmere.	R. B. Sharpe, Esq. [P.].
c'. ♀ ad. sk.	Cashmere.	Pinwill Coll.
d'. ♂ ad. sk.	Srinuggur, July 22, 1873 (*J. Biddulph*).	Hume Coll.
e', f. ♂ ♀ ad. sk.	Hirpore, May 13, 1871 (*W. E. Brooks*).	Hume Coll.
g'. Ad. sk.	Sutlej Valley (*Sir E. Buck*).	Hume Coll.
h', i'. Ad. sk.	Kotegurh, beyond Simla, Oct. 30, 1869.	Hume Coll.
k'. Ad. sk.	Kotegurh, Dec. 1868.	Hume Coll.
l', m', n'. Ad. sk.	Kotegurh, Jan. 10, 1869.	Hume Coll.
o'. Ad. sk.	Kotegurh, March 1871.	Hume Coll.
p', q', r', s'. Ad. sk.	Kotegurh, April 1871.	Hume Coll.
t'. Ad. sk.	Kotegurh.	Hume Coll.

u', *v'*. Ad. sk.	Simla, Feb. 1873.	Hume Coll.
w', *x'*. Ad. sk.	Simla, Jan. 1, 1868.	Hume Coll.
y'. Juv. sk.	Middle range of hills, north of Masuri.	Hume Coll.
z'. Ad. sk.	Almora.	Pinwill Coll.
a. ♀ ad. sk.	Derali, May 20, 1874 (*W. E. Brooks*).	Hume Coll.
β. Var. alb. sk.	Himalayas.	

27. CHRYSOMITRIS *.

Carduelis, pt., *Briss. Orn.* iii. p. 33 (1760).
Acanthis, pt., *Bechst. Orn. Taschenb.* p. 125 (1803).
Spinus, pt., *Koch, Syst. baier. Zool.* p. 233 (1816).
Serinus, pt., *Boie, Isis*, 1822, p. 555.

	Type.
Spinus, *Boie, Isis*, 1826, p. 974	C. tristis.
Chrysomitris, *Boie, Isis*, 1828, p. 322	C. spinus.
Citrinella, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838)	C. citrinella.
Chlorospiza, pt., *Keys. & Blas. Wirb. Eur.* p. 162 (1840).	
Astragalinus, *Cab. Mus. Hein.* Th. i. p. 159 (1850)	C. tristis.
Hypacanthis, *Cab. Mus. Hein.* Th. i. p. 161 (1850)	C. spinoides.
Pyrrhomitris, *Bp. Consp.* i. p. 517 (1850)	C. cucullata.
Sporagra, *Reichenb. Syst. Av.* tab. lxxix. fig. 14	? C. magellanica.
Melanomitris, *Cass. Proc. Philad. Acad.* 1865, p. 91.	C. astrata.
Pseudomitris, *Cass. tom. cit.* p. 93	C. psaltria.
Chloroptila, *Salvad. Faun. Ital., Ucc.* p. 152 (1869)	C. citrinella.

Cf. *Stejneger, Auk*, i. p. 360 (1884).

An examination of the types of the various genera detailed in the

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* Dr. Stejneger has, with his usual care, worked out the question of the priority of the generic name to be used for the Siskins, and has adopted *Spinus* of Koch, for which he allows Boie to have fixed the type in 1826. As, however, Boie himself proposed the genus *Chrysomitris* for these birds in 1828, and the name has been in common use, I have not adopted this change, which would alter a number of well-known names without any adequate object. I agree in this particular case with the arguments of Messrs. Salvin and Godman in favour of the retention of *Chrysomitris* (Biol. Centr.-Amer., Aves, i. p. 427).

Chrysomitris pistacina.

Chrysomitris pistacina, *Bp. Consp.* i. p. 515 (1850, *ex Eversm. MSS. in Berol.*); *Licht. Nomencl. Av.* p. 46 (1854); *Blasius, Ibis*, 1861, p. 295; *Cass. Proc. Philad. Acad.* 1865, p. 90.
Astragalinus pistacinus, *Cab. Mus. Hein.* Th. i. p. 159, note (1850).
Fringilla psittacina (!), *Gray, Hand-l. B.* ii. p. 82, no. 7193 (1870).

"Of small size; rufous olive; underneath olive-yellow; under wing-coverts and under tail-coverts white; wings and tail dusky; all the tail-coverts, secondary quills, and tail-feathers whitish at the tip of the inner web." (*Bp. l. c.*)

Hab. Siberia.

I have not been able to determine what this species can be.

above synonymy shows that most of the characters have been founded on the variable shape of the bill, but the intermediate links between the stoutest and the most slender-billed species are complete when all are compared; and as they appear to me to be simply modifications of the same style of bill, I have not separated them generically.

Key to the Species.

a. With the head black or blackish brown.
  a'. With the throat not black [or with only a slight blackish shade in *C. atriceps*].
    a''. Hind neck of a different colour to the crown, which has always a more or less well-defined black cap.
      a'''. No yellow at base of primaries; upper tail-coverts white; inner web of tail-feathers white; under surface of body bright yellow like the upper surface ..... *tristis*, p. 195.
      '''. Base of quills bright yellow, forming a more or less distinct speculum.
        a^4. Upper tail-coverts bright golden yellow, like the sides of the face and under surface of body ..... *yarrelli*, p. 198.
        b^4. Upper tail-coverts greenish, like the back, with the rump a little more yellow or yellowish green.
          ^{5}. No dull blackish shade on the throat; under surface of body rather bright yellow.
            a^3. Feathers below the eye and ear-coverts greenish, like the sides of the neck ..... *spinescens*, p. 199.
            b^6. Feathers below the eye and upper part of ear-coverts black like the crown ..... *sclateri*, p. 200.
          b^5. A dull blackish shade on the throat; under surface of body dull green or grey..... *atriceps*, p. 200.
        c^4. Upper tail-coverts black; crown blackish, separated from the back, which is blackish brown, by a yellow shade on the sides of the neck, forming a half-collar ..... *spinoides*, p. 201.
      c'''. Base of primaries white, forming a speculum; inner web of tail-feathers white, not yellow; upper surface green; under surface of body yellow ..... *psaltria*, p. 204. / *arizonæ*, p. 206.
    b''. Entire back black, like the head and hind neck.
      d'''. Inner web of tail-feathers with a white mark ..... *mexicana*, p. 206.
      e'''. No white on inner web of tail-feathers (occasionally a small irregular white patch) *colombiana*, p. 208.
  b'. Throat black.
    c''. Back black, like the head; rump also black.

f'''. Black not extending beyond the fore neck; sides of body yellow, or yellow slightly mixed with black. [p. 209.
*d*⁴. Thighs black ..... *xanthogaster,*
*e*⁴. Thighs yellow ..... *stejnegeri,* p. 210.
g'''. Black of the throat extending over the whole of the breast and sides of the body *atrata,* p. 212.
d''. Back black, like the head, or with narrow yellow edges to the feathers; rump bright yellow..... *uropygialis,*
e''. Back olive greenish or yellowish, in contrast to the crown, which is black and forms a cap. [p. 211.
h'''. Tail yellow at base.
*f*⁴. Under tail-coverts paler than the breast, white or yellowish white, the long ones centred with black; sides of face not black like the crown.
*c*⁵. Flanks streaked with black ..... *spinus,* p. 212.
*d*⁵. Flanks uniform ..... *barbata,* p. 216.
*g*⁴. Under tail-coverts bright yellow like the breast; sides of face black like the crown.
*e*⁵. Median wing-coverts edged with the same yellow as the back; inner secondaries yellow at the end of the outer web.
*c*⁶. Back nearly or quite uniform, not mottled with dusky centres to the feathers.
*a*⁷. Larger: green above, bright yellow below, green on the sides..... *icterica,* p. 217.
*b*⁷. Similar to the foregoing, but bright yellow; back greenish ..... *siemiradzkii,*
*c*⁷. Similar to the foregoing, but with a long thin bill..... [p. 221. *longirostris,*
*d*⁶. Back mottled with dusky blackish centres to the feathers. [p. 220.
*d*⁷. Throat only black; lower throat yellow like the breast ..... *capitalis,* p. 219.
*e*⁷. Throat and fore neck both black .. *boliviana,* p. 220.
*f*⁵. Median wing-coverts and inner secondaries entirely black.
*e*⁶. The black of the throat extending on to the fore neck; under surface of body yellow ..... *notata,* p. 221.
*f*⁶. The black of the throat confined to the throat itself; fore neck and underparts greenish ..... *forreri,* p. 222.
i.''' Tail not yellow at base.
*h*⁴. No white on outer tail-feathers; ear-coverts black like crown and throat .. *nigriceps,* p. 222.
*i*⁴. A large white patch on the inner web of the outer tail-feather; ear-coverts grey, contrasting with the black crown and throat..... *lawrencii,* p. 223.
f''. Back vermilion, like the under surface ..... *cucullata,* p. 225.

b. With no black on the head and throat.
c'. With the head uniform, not streaked.
g''. Rump greenish or yellow.
k'''. Upper tail-coverts ashy grey; no yellow at base of primaries; a white patch on the tail-feathers ..... *tristis* ♀, p. 197.
l'''. Upper tail-coverts yellow or greenish.
*k*⁴. Base of tail-feathers yellow.
*g*⁵. Throat and underparts, sides of face, and rump bright yellow ..... *yarrelli* ♀, p. 199.
*h*⁵. Throat ashy; head greyish; inner secondaries broadly edged with white *barbata* ♀, p. 216.
*k*⁴. No yellow at base of tail-feathers, which have a patch of white on the inner web ..... *lawrencii* ♀, [p. 224.
*m*⁴. With no yellow at the base of the tail; no white on tail-feathers.
*i*⁵. Hind neck dull olive-yellow, like the head and back ..... *thibetana* ♂, [p. 226.
*k*⁵. Hind neck and sides of neck grey .... *citrinella* ♂ ♀, [p. 230.
h''. Rump vermilion like the breast; back and throat ashy grey ..... *cucullata* ♀, [p. 225.
d'. With the head streaked with dusky brown or blackish.
i''. No streaks on the sides of the body ..... *icterica* ♀, p. 218.
k''. Sides of body streaked.
m'''. Base of tail yellow.
*n*⁴. Throat streaked with dusky brown, as well as the chest.
*l*⁵. No yellow at base of secondaries..... *spinoides* ♀, [p. 202.
*m*⁵. Secondaries with a broad yellow base . *pinus* ♂, p. 227.
*o*⁴. Throat uniform dull white like the centre of the breast and abdomen ..... *pinus* ♀, p. 228.
n'''. No yellow base to the tail. *spinus* ♀, p. 214.
*p*⁴. Back olive-green, streaked with blackish; wing-coverts black, edged with yellow.
*n*⁵. Abdomen yellow; under tail-coverts plain yellow. [♂ ♀, p. 229.
*g*⁶. Breast streaked with black ..... *citrinelloides*
*h*⁶. Breast not streaked with black .... *melanops*, p. 229.
*o*⁵. Abdomen white; under tail-coverts yellowish white with black centres . *thibetana* ♀, [p. 226.
*q*⁴. Back uniform brown, as also the wing-coverts ..... *totta* ♂ ♀, p. 231.

1. Chrysomitris tristis.

Carduelis americanus, *Catesby, N. H. Carol.* i. p. 43, pl. 43 (1731).
American Goldfinch, *Edwards, Gleanings*, ii. p. 133, pl. 274 (1760); *Lath. Gen. Syn.* ii. pt. 1, p. 288 (1783).
Le Chardonneret d'Amérique, *Briss. Orn.* iii. p. 64 (1766).
Fringilla tristis, *Linn. Syst. Nat.* i. p. 320 (1766); *Gm. S. N.* i. p. 907 (1788); *Wils. Amer. Orn.* i. p. 20, pl. i. fig. 2 (1808); *Bp. Amer. Orn.* i. p. 57, pl. 6. fig. 4 (1825); *Audub. B. Amer.* pl. 33; *id. Orn. Biogr.* i. p. 172 (1831), v. p. 510 (1839); *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 82, no. 7192 (1870).
Le Chardonneret jaune, *Montb. Hist. Nat. Ois.* iv. p. 212 (1778).

Le Chardonneret de Canada, *Daubent. Pl. Enl.* iv. pl. 202. fig. 2.
Carduelis tristis, *Bp. Obs. Wils.* no. 96 (1825); *Audub. Syn.* p. 116 (1839); *id. B. Amer.* 8vo, iii. p. 129, pl. 181 (1841).
Spinus tristis, *Boie, Isis*, 1828, p. 974; *Stejneger, Auk*, i. p. 362 (1884); *Turner, Pr. U. S. Nat. Mus.* viii. p. 240 (1885); *A. O. U. Check-list N. Amer. B.* p. 261 (1886); *Anthony, Auk*, iii. p. 168 (1886); *Seton, t. c.* p. 322.
Carduelis americana, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 268 (1831); *Jard. ed. Wils. Amer. Orn.* p. 11, pl. 1. fig. 2 (1832).
Chrysomitris tristis, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp. Av.* i. p. 517 (1850); *Baird, B. N. Amer.* p. 421 (1858); *Scl. Cat. Amer. B.* p. 123 (1862); *Blakist. Ibis*, 1863, p. 70; *Dresser, Ibis*, 1865, p. 486; *Baird, Ibis*, 1867, p. 289; *Cooper, B. Calif.* p. 167 (1870); *Coues, Ibis*, 1872, p. 56; *id. Key N. Amer. B.* p. 132 (1874); *Allen, Bull. Mus. C. Z.* iii. p. 176 (1872); *Coues, B. N.-West*, p. 116 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 471, pl. 22. figs. 7, 8 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 243 (1875); *Ridgw. Rep. Surv.* 40*th Par.* p. 461 (1877); *Coues, Bull. U. S. Geol. Surv.* iv. p. 577 (1878); *Merrill, Pr. U. S. Nat. Mus.* i. p. 126 (1878); *Belding, t. c.* p. 413 (1879); *Cooper, op. cit.* ii. p. 246 (1880); *Salv. Cat. Strickl. Coll.* p. 214 (1882); *Rathbun, Bright Feathers*, pt. iii. (1882).
Astragalinus tristis, *Cab. Mus. Hein.* Th. i. p. 159 (1850); *Ridgw. Pr. U. S. Nat. Mus.* iii. p. 177 (1880); *Coues, Check-list*, p. 50 (1882); *id. Key N. Amer. B.* 2nd ed. p. 354 (1884); *Dutcher, Auk*, i. p. 329; *Beckh. Auk*, ii. p. 141 (1885); *Agersb. t. c.* p. 279.

Adult male in summer plumage. General colour above bright lemon-yellow, a trifle more dingy on the mantle and upper back; lesser and median wing-coverts yellow like the back, the latter with blackish bases; greater coverts black, tipped with white; bastard-wing, primary-coverts, and quills black, edged with white towards the ends and round the tips; upper tail-coverts white; tail-feathers black, the centre ones broadly edged with white, all the rest with a large white spot at the end of the inner web; forehead and sinciput, as well as the lores and upper margin of cyelid, black; remainder of sides of face and entire under surface of body lemon-yellow; thighs and under tail-coverts white; under wing-coverts white, the edge of the wing black; axillaries white, edged with yellow; quills blackish below, ashy along the inner web: "bill and feet yellowish brown; iris dark brown" (*Audubon*). Total length 4·6 inches, culmen 0·45, wing 3, tail 1·95, tarsus 0·55.

Adult male in winter plumage. Earthy brown washed with yellow, the head like the back, the hind neck rather more greenish, brighter yellow on the sides of the neck; rump tinged with lemon-yellow, upper tail-coverts ashy white; wings much as in summer, but the lesser coverts brown like the back, and the white tips to the greater coverts and secondaries tinged with brown; tail as in summer, but with the white markings more dingy and shaded with ashy brown; crown of head like the back, and only a little more yellow, without any black patch; sides of face and throat yellow; remainder of

under surface white, washed with yellow; the sides of the body and flanks washed with brown.

The winter plumage is retained till the following April or May, according to Dr. Coues. Specimens in changing plumage in the Museum show that the bright summer dress is attained by a direct moult, evidencing that this species has both a spring and autumn moult.

Adult female in breeding-plumage. General colour above ruddy brown washed with yellow, the rump bright lemon-yellow; lesser wing-coverts like the back; median and greater coverts dusky black, tipped with white; bastard-wing, primary-coverts, and quills dusky black, edged with ashy white, the secondaries more broadly margined; upper tail-coverts hoary whitish; tail-feathers blackish, the centre ones with a broad margin of hoary white on the inner web, the remainder with a large whitish mark at the end of the inner web; crown of head dark olive-yellow, brighter yellow on the forehead and eyebrow; lores and feathers below the eye bright yellow; ear-coverts dull olive-brown; cheeks and under surface of body bright yellow, greener on the sides of the body; thighs ashy; under tail-coverts white; under wing-coverts and axillaries ashy whitish, the latter edged with yellow; quills below dusky, ashy along the inner edge. Total length 4·3 inches, culmen 0·4, wing 2·75, tail 1·75, tarsus 0·55.

Young birds resemble the old females, but are much browner, and have the tips to the wing-coverts and quills pale ruddy brown; the under surface of the body is dull olive, with the abdomen and under tail-coverts pale sulphur-yellow.

Hab. North America generally, especially the Eastern United States, wintering as far north as New England and as far south as Mexico.

a, b. ♂ ad. sk.	Fort Dufferin, Manitoba, June 1873 (*G. Dawson*),	U.S. Boundary Commission.
c. ♂ ad. sk.	S. Louis Co., Missouri, May 1883.	H. K. Coale, Esq. [P.].
d. ♂ ad. sk.	Lake Forest, Illinois, April 3, 1877.	H. K. Coale, Esq. [P.].
e. Imm. sk.	Lake Forest, Illinois, Nov. 2, 1880.	R. B. Sharpe, Esq. [P.].
f, g. ♀ ad. sk.	Colehour, Illinois, May 18.	R. B. Sharpe, Esq. [P.].
h. ♂ ad. sk.	Mount Carmel, Illinois, July 1885 (*J. L. Ridgway*).	Salvin-Godman Coll.
i. Pull. sk.	Halfday, Illinois, Aug. 21, 1877 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Stark Co., Indiana, Jan. 1, 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Pennsylvania, March 1842 (*S. F. Baird*; Sm. no. 11692).	U. S. Nat. Museum [P.].
m. ♂ ad. sk.	Albany, New York (*D. Hurst*).	Sclater Coll.
n. ♀ ad. sk.	Rock Creek, Distr. Columbia, Jan. 2, 1860 (*Dr. Prentiss*; Sm. no. 28990).	Salvin-Godman Coll.

o. ♂ ad. sk.	Little Falls, Potomac, D.C. July 27, 1859 (*E. Coues*; Sm. no. 28984).	Salvin-Godman Coll.
p. ♂ ad. sk.	Smith's Woods, D.C., April 19, 1861 (*E. Coues*; Sm. no. 28987).	U. S. National Mus. [P.].
q. ♂ ad. sk.	Haw's Lot, D.C., April 24, 1860 (*Dr. Prentiss*; Sm. no. 29982).	Salvin-Godman Coll.
r. ♂ ad. sk.	California.	Lord Walsingham [P.].
s, t. ♂ ad. sk.	California.	Purchased.
u. ♂ ad. sk.	Red Bluff, N. California, April 18, 1884 (*C. H. Townsend*; Sm. no. 98297).	U. S. Nat. Museum [P.].
v. ♂ imm. sk.	Jalapa (*De Oca*).	Sclater Coll.
w, x. ♂ ♀ imm. sk.	Jalapa (*De Oca*).	Salvin-Godman Coll.
y. ♂ ad. st.	Mexico.	Purchased.
z. Skeleton, mtd.	N. America.	Purchased.

2. Chrysomitris yarrelli.

Fringilla mexicana (*nec Sw.*), *Audub. B. Amer.* v. p. 282, pl. 433 *.
Carduelis yarrelli, *Audub. B. Amer.* 8vo, iii. p. 136, pl. 184 (1841, ♂ nec ♀).
Fringilla yarrelli, *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 81, no. 7194 (1870).
Chrysomitris yarrellii, *Bp. Consp.* i. p. 517 (1850); *Baird, B. N. Amer.* p. 421 (1858); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 471, note (1874); *Ridgw. Pr. U. S. Nat. Mus.* iii. p. 213 (1880); *Forbes, Ibis*, 1881, p. 338.
Astragalinus yarrelli, *Cab. Mus. Hein.* Th. i. p. 159, note (1850); *Ridgw. Pr. U. S. Nat. Mus.* iii. p. 213 (1880).
Chrysomitris hypoxantha, *Cab. J. f. O.* 1866, p. 160; *Pelz. Orn. Bras.* p. 231, note, p. 440 (1871).
Fringilla hypoxantha, *Gray, Hand-l. B.* ii. p. 81, no. 7184 (1870).

Adult male. General colour above olive-yellow, paler and clearer yellow on the hind neck; lower back, rump, and upper tail-coverts bright yellow; lesser wing-coverts like the back; median and greater coverts black, broadly tipped with yellow; bastard-wing and primary-coverts black; quills black, edged with olive-yellow towards the ends, the secondaries with whitish, all but the innermost secondaries bright yellow at the base; tail-feathers black, yellow for the basal half; crown of head black, forming a cap; nape like the back; lores and eyelid black; ear-coverts, cheeks, sides of neck, and entire under surface of body bright yellow, a little greener on the sides of body and flanks; under wing-coverts and axillaries bright yellow; quills below black, yellow along the edge of the inner web. Total length 4 inches, culmen 0·4, wing 2·45, tail 1·4, tarsus 0·5.

* The male is evidently the Brazilian *C. yarrelli*, but the female is either *C. psaltria* or *C. mexicana*.

Adult female. Different from the male. General colour above olive-yellow; rump and upper tail-coverts bright yellow; lesser wing-coverts like the back; median and greater series blackish, tipped with yellow; bastard-wing, primary-coverts, and quills blackish brown, all the latter yellow at the base except the innermost, which are whitish towards the end of the outer web; tail-feathers blackish, yellow at the base; head like the back; lores, sides of face, and entire under surface of body bright yellow, richer on the centre of the breast and abdomen; under wing-coverts, axillaries, and quill-lining paler yellow. Total length 3·7 inches, culmen 0·4, wing 2·3, tail 1·2, tarsus 0·5.

Hab. Brazil.

a, b. ♂ ♀ ad. sk.	Brazil.	Purchased.
c, d. ♂ ♀ ad. sk.	Brazil.	Sclater Coll.
e. ♂ ad. sk.	Bahia.	Sclater Coll.
f. ♂ ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.

3. Chrysomitris spinescens.

Fringilla spinescens, *Licht. in Mus. Berol., undè*
Chrysomitris spinescens, *Bp. Consp.* i. p. 517 (1850); *Licht. Nomencl. Av.* p. 46 (1854); *Scl. P. Z. S.* 1855, p. 159; *id. Cat. Amer. B.* p. 124; *Cass. Proc. Philad. Acad.* 1865, p. 90; *Cab. J. f. O.* 1866, p. 160; *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873).
Fringilla spinescens, *Gray, Hand-l. B.* ii. p. 81, no. 7178 (1870).

Adult male. General colour above dull green, the rump greenish yellow; lesser wing-coverts like the back; median coverts black, yellowish green at the ends; greater coverts black, tipped with bright yellow; bastard-wing and primary-coverts black; quills black, edged with greenish yellow, the inner secondaries margined with yellowish green, ending in white towards the ends of the outer web; all but the innermost secondaries yellow at the base; upper tail-coverts dull yellowish green; tail-feathers black, yellow at the base; crown of head black, forming a cap; lores and eyelid also black; ear-coverts, cheeks, and sides of neck yellowish green, washed with lighter yellow on the cheeks; remainder of under surface dull greenish yellow, brighter yellow on the breast and abdomen, the lower abdomen white; under tail-coverts bright yellow; under wing-coverts and axillaries pale yellow with dusky bases; quills below blackish, yellow towards the base of the inner web. Total length 4·3 inches, culmen 0·45, wing 2·6, tail 1·55, tarsus 0·55.

Adult female. Differs from the male in being greyish green above, yellowish green on the lower back and rump, lacking the black cap, so that the head is like the back; sides of face and under surface of body greenish grey, white on the lower breast and abdomen; under tail-coverts white tinged with yellow. Total length 4·3 inches, culmen 0·4, wing 2·6, tail 1·6, tarsus 0·55.

Hab. U. S. Colombia.

a, b. ♂ ad. sk.	Bogotá.	Sclater Coll.
c, d. ♂ ad. sk.	Bogotá.	Salvin-Godman Coll.
e, f. ♂ ♀ ad. sk.	Sierra Nevada, Santa Marta, Sept. 9, 1879 (*F. Simons*).	Salvin-Godman Coll.
g. ♂ ad. sk.	San Sebastian, Santa Marta, Aug. 12, 1879 (*F. Simons*).	Salvin-Godman Coll.

4. Chrysomitris sclateri.

Chrysomitris icterica, pt., *Scl. Cat. Amer. B.* p. 125 (1862).

Adult male. General colour above dull yellowish green, the entire mantle and back mottled with dusky centres to the feathers; rump bright yellow; lesser wing-coverts yellowish green like the back, with dusky bases; median and greater coverts black, tipped with yellow, the latter more broadly; bastard-wing and primary-coverts black; quills black, all yellow at base, the secondaries fringed with white at the tips, the innermost margined with yellowish white at the ends; upper tail-coverts blackish, edged with yellowish green; tail-feathers black, with a broad yellow base; crown of head black, forming a cap, the occiput and nape a little yellower than the mantle; lores, feathers below the eye, and upper ear-coverts black; remainder of ear-coverts, cheeks, and sides of neck bright yellow; throat and entire under surface of body bright yellow; centre of abdomen ashy whitish; sides of body and flanks slightly washed with greenish; thighs ashy whitish; under tail-coverts bright yellow; under wing-coverts and axillaries yellow; quills below blackish, yellow towards the base of the inner web. Total length 4·3 inches, culmen 0·4, wing 2·7, tail 1·65, tarsus 0·55.

Adult female. Different from the male, and wanting the black cap. Upper surface dull greenish, mottled with dusky centres to the feathers, the head like the back; rump bright yellow; wings and tail as in the male, but the yellow bases to the feathers not so bright; under surface of body ashy brown, yellowish on the throat and breast; abdomen white; under tail-coverts deep yellow. Total length 4·2 inches, culmen 0·4, wing 2·35, tail 1·5, tarsus 0·5.

Hab. Ecuador.

a. ♂ ad. sk.	Riobamba, Ecuador, June 1858 (*L. Fraser*).	Sclater Coll.
b. ♀ ad. sk.	Cuenca, Ecuador (*L. Fraser*).	Sclater Coll.

5. Chrysomitris atriceps.

Chrysomitris atriceps, *Salv. P. Z. S.* 1863, p. 190; *id. Ibis*, 1866, p. 194; *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Ridgw. Ibis*, 1884, p. 43; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 429, pl. xxxi. figs. 1, 2.

Fringilla atriceps, *Gray, Hand-l. B.* i. p. 81, no. 7180 (1870).

Adult male. General colour above dark olive-green, scarcely lighter on the lower back and rump; upper tail-coverts dull olive-

green; lesser wing-coverts like the back; median and greater coverts blackish, tipped with olive-green, more yellow on the latter; bastard-wing, primary-coverts, and quills black, the latter edged with olive-yellow, broader on the secondaries; all the quills, excepting the innermost secondaries, bright yellow at the base; tail-feathers blackish, edged with olive-green, all but the two centre feathers with the basal two thirds bright yellow; crown of head black; sides of face and under surface of body dark olive-green; the lores, feathers round the eye, fore part of cheeks, and chin and upper throat dusky blackish; centre of breast and abdomen rather brighter yellow; under tail-coverts bright yellow, centred with black; under wing-coverts dark olive-green; axillaries brighter yellow; quills below dusky, yellowish along the edge of the inner web and bright yellow at the base. Total length 4·4 inches, culmen 0·45, wing 2·6, tail 1·65, tarsus 0·55.

Another male shot by Mr. Salvin at the same time as the one above described is in worn plumage, being dull ashy above, washed with olive-yellow; the sides of the face and under surface of the body are dark cindery grey, with a slight wash of yellow on the breast; crown black; throat blackish. This is probably a male of the previous season, which would account for its less brilliant coloration.

Hab. Guatemala.

a, b. ♂ ad. sk.	Quezaltenango, Guatemala, Aug. 1882 (*O. S.*).	Salvin-Godman Coll. (Types of species.)

6. Chrysomitris spinoides.

Indian Siskin, *Lath. Gen. Hist. B.* vi. p. 84 (1823).

Carduelis spinoides, *Vig. P. Z. S.* 1831, p. 44; *Gould, Cent. Himal. B.* pl. 33. fig. 2 (1832); *Blyth, J. A. S. Beng.* xii. p. 985 (1843); *Hodgs. Icon. ined. in Brit. Mus., Passeres,* pl. 284. nos. 442–4; *id. in Gray's Zool. Misc.* p. 84 (1844).

Chrysomitris spinoides, *Blyth, J. A. S. Beng.* xiii. p. 956 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 106 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 123 (1849); *Bp. Consp.* i. p. 514 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 493 (1856); *Jerd. B. Ind.* ii. p. 409 (1863); *Beavan, Ibis,* 1867, p. 138, 1868, p. 278; *Pelz. t. c.* p. 319; *Brooks, Ibis,* 1869, p. 59; *David & Oust. Ois. Chine,* p. 337 (1877); *Salv. Cat. Strickl. Coll.* p. 215 (1882).

Fringilla spinoides, *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 81, no. 7176 (1870).

Hypacanthis spinoides, *Cab. Mus. Hein.* Th. i. p. 161 (1850); *Hume, Nests & Eggs Ind. B.* p. 472 (1873); *id. Str. F.* 1879, p. 108; *Scully, t. c.* p. 336.

Coccothraustes spinoides, *Brooks, Str. F.* 1875, p. 255.

Adult male. General colour above blackish chocolate, the feathers of the mantle subterminally dull yellowish; lower back and rump uniform bright yellow; lesser wing-coverts bright yellow; median coverts bright yellow, with black bases; greater coverts black, bright yellow along the outer edge and with a broad tip of the same colour, forming a band; bastard-wing black, fringed with bright

yellow; primary-coverts black; quills black, fringed with greyish white at the tip, the secondaries more broadly, the inner ones broadly edged with greyish white towards the tip; the primaries bright yellow towards the base of the outer web, forming a speculum; the first primary only slightly washed with yellow; upper tail-coverts dull greenish, ashy grey towards the ends of the outer ones; tail-feathers pale yellow, bright yellow externally, the shafts and ends of the feathers black, forming a band when the tail is spread, the two centre feathers black, fringed with yellow; crown of head dull black; hind neck blackish, slightly varied with yellow; forehead and a broad eyebrow bright yellow, with a few black tips to the frontal plumes; eyelid black, as well as a spot in front of the eye; lower edge of eyelid yellow like a streak below the eye; ear-coverts black, extending below the eye; cheeks bright yellow, separated from the throat by a broad streak of black, which crosses the middle of the cheeks and joins the black below the eye; the entire under surface of body bright yellow; sides of breast olive-greenish; sides of body and flanks browner, mottled with subterminal spots of white; thighs yellow; under tail-coverts bright yellow; under wing-coverts, axillaries, and edge of the wing bright yellow; quills below blackish, yellow towards the base of the inner edge: "bill fleshy pink; feet pale fleshy brown" (*A. O. Hume*). Total length 4·9 inches, culmen 0·45, wing 3, tail 1·75, tarsus 0·6.

The specimen described is one from Fagoo, shot in the end of July, and apparently in full breeding-plumage. Specimens killed in August are similar, and have the yellow forehead greatly developed, but have the plumage more worn. In November the birds moult into winter plumage, which is not very different from the breeding-plumage, except that the forehead is blackish like the head, the lores and eyebrow being yellow. The vividness of the latter colour depends more upon age than season, the older birds being by far the brightest. The male obtained on the 25th of October has the plumage much worn, and has a complete frontal band of yellow, while the hind neck is so mottled with yellow as almost to form a collar.

The *adult female* only differs from the male in being rather browner above, and never gets the yellow forehead, resembling thus the male in winter plumage. The yellow colour is never so bright and the sides of the body are dingy brown, many of the chest-feathers being tipped with greenish brown: "bill fleshy pink, paler at base of lower mandible; legs and feet fleshy brown" (*A. O. Hume*). Total length 5 inches, culmen 0·4, wing 3, tail 2, tarsus 0·55.

Young (Masuri, Oct. 1869). Browner than the adults and striped with blackish brown, the crown and rump resembling the back; the latter slightly tinged with yellow; lesser wing-coverts like the back; median and greater coverts black, edged and tipped with brownish buff; bastard-wing and primary-coverts black; quills black, tipped with brownish buff, broader and more yellowish ashy on the ends of the inner secondaries; primaries externally yellow

at the base ; tail-feathers blackish brown, all but the centre ones edged with yellow, the base yellow, increasing towards the outer feather ; a slight trace of a yellow eyebrow ; cheeks and ear-coverts light brown ; sides of neck yellow, streaked with pale brown ; under surface of the body pale yellow, everywhere streaked with brown, excepting on the throat and centre of lower abdomen ; the breast and sides of body washed with pale reddish brown.

Young males seem to be yellower underneath than young females, and they are also somewhat darker, and more narrowly striped with black below. The Hume collection contains a series of young birds in the moult. Two from Cashmere are beginning to assume the adult plumage in August, but one killed at Masuri in October shows no signs of a moult ; but from November to March the moult goes on, the males having mostly gained the adult plumage by the latter month. The new plumage does not seem to be so bright in young as in really old birds ; and the immature birds can also be readily distinguished by the greater amount of black on the tail. The females seem to take longer in acquiring the adult plumage, as two birds obtained at Almora in May have not yet finished moulting. Traces of blackish stripes are frequently seen, being the remains of the preceding immature stage.

Hab. Himalayas from Cashmere to Sikhim, extending into the province of Szechuen in Western China.

a. ♂ ad sk.	Thunnamundi, Cashmere, May 9, 1878 (*W. E. Brooks*).	Hume Coll.
b. ♀ ad. sk.	Burmungallah, Cashmere, June 6, 1871 (*W. E. Brooks*).	Hume Coll.
c, *d*. Imm. sk.	Cashmere, Aug. 1870.	Hume Coll.
e. Juv. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
f, *g*. Ad. et juv. st.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
h. ♂ ad. sk.	Mutiana, near Simla, June 19, 1870 (*W. Davison*)	Hume Coll.
i, *k*. ♂ ad. sk.	Mahasoo, near Simla, Aug. 2, 1868 (*A. O. H.*).	Hume Coll.
l. ♂ ; *m*, *n*, *o*. ♀ ad. sk.	Fagoo, near Simla, July 29, 1868 (*A. O. H.*).	Hume Coll.
p. ♂ ad. sk.	Simla, Sept. 23, 1879 (*W. Davison*).	Hume Coll.
q, *r*. ♂ ; *s*. ♀ ad. sk.	Simla, Sept. 1880 (*W. Davison*).	Hume Coll.
t. ♂ ad. ; *u*. ♀ juv. sk.	Simla, Sept. 1873 (*A. O. H.*).	Hume Coll.
v. ♂ ad. ; *w*. ♀ imm. sk.	Simla, Oct. (*W. Davison*).	Hume Coll.
x, *y*. ♂ ad. ; *z*. ♀ ad. sk.	Simla, Nov. 1880 (*W. Davison*).	Hume Coll.
a'. ♂ ad. sk.	Simla, Dec. 15, 1880 (*W. Davison*).	Hume Coll.
b'. ♀ ad. sk.	Nakunda, June 18, 1870 (*A. O. H.*).	Hume Coll.
c'. ♂ ad. sk.	Kotegurh, April 1839.	Hume Coll.
d', *e'*. Juv. sk.	Kotegurh, Dec. 1868.	Hume Coll.
f'. ♂ ad. sk.	Surra in Kunaiti, Nov. 8, 1869.	Hume Coll.
g'. ♂ ad. ; *h'*. Imm. sk.	Masuri, Oct. 1869.	Hume Coll.

i', *k'*. Ad. sk.	Masuri.	Hume Coll.
l'. ♂ Imm. sk.	Middle range of hills north of Masuri.	Hume Coll.
m', *n'*. ♂ ♀ ad.	Naini Tal, Sept. 1866.	Hume Coll.
o', *p*. ♀ imm. sk.	Almora, May 15, 1868.	Hume Coll.
q'. ♂ ad. sk.	Between Sansoo and Kounangulla, May 29, 1874 (*W. E. Brooks*).	Hume Coll.
r'. ♂ ad. sk.	Rajgurh, Kumaon, June 20, 1868 (*A. Anderson*).	Hume Coll.
s', *t'*. Imm. sk.	Kumaon (*R. Strachey*).	India Museum.
u'. [♀] imm. sk.	Residency Grounds, Khatmandu, Nepal, March 16, 1878 (*J. Scully*).	Hume Coll.
v', *w'*, *x'*, *y'*. ♂ ad.; *z'*. Juv. sk.	Nepal.	Hodgson Coll.
a, *β*. ♂; *γ*. ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
δ, *ε*. ♂ ad.; *ζ*. ♂ imm.; *η*. ♀ imm. sk.	Native Sikhim, March 1874 (*L. Mandelli*).	Hume Coll.
θ. ♂ ad. sk.	Sikhim, March 1874 (*L. Mandelli*).	Hume Coll.
ι, *κ*. ♂ ad. et juv. sk.	Sikhim, Jan. 1874 (*L. Mandelli*).	Hume Coll.
λ, *μ*. ♀ juv. sk.	Sikhim, Feb. 1873 (*L. Mandelli*).	Hume Coll.
ν, *ξ*. ♂ ad. et juv. sk.	Sikhim, Feb. (*L. Mandelli*).	Hume Coll.
ο, *π*. Juv. sk.	Sikkim.	Hume Coll.
ρ. ♂ ad. sk.	Sikhim.	Hume Coll.
σ. Juv.; *τ*. ♂ ad. sk.	Sikhim (*W. E. Brooks*).	Hume Coll.
υ, *φ*. ♂ ad. sk.	Darjiling, 1871.	Hume Coll.
χ, *ψ*, *ω*. Sterna & various bones.	Nepal.	Hodgson Coll.

7. Chrysomitris psaltria.

Fringilla psaltria, *Say in Long's Exped.* ii. p. 40 (1823); *Bp. Amer. Orn.* i. p. 54, pl. vi. fig. 3 (1825); *Nutt. Man.* i. p. 510 (1832); *Audub. B. Amer.* pl. 400; *id. Orn. Biogr.* v. p. 85 (1839).

Carduelis psaltaria, *Jard. ed. Wils.* iii. p. 311, pl. vi. fig. 3 (1832).

Chrysomitris psaltria, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *Gamb. Journ. Philad. Acad.* i. p. 52 (1847); *Bp. Consp.* i. p. 516 (1850); *Baird, B. N. Amer.* p. 422 (1858); *Scl. Cat. Amer. B.* p. 124 (1862); *Cooper, B. Calif.* p. 168 (1870); *Allen, Bull. Mus. Comp. Zool.* iii. p. 176 (1873); *Coues, Key N. Amer. B.* p. 132 (1872); *id. B. N.-West*, p. 116 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 244, pl. iv. fig. 2 (1875); *Belding, Proc. U.S. Nat. Mus.* i. p. 413 (1878); *Cooper, op. cit.* ii. p. 247 (1880); *Ridgw. op. cit.* iii. p. 177 (1880); *Belding, op. cit.* v. pp. 531, 537 (1882), vi. p. 347 (1883); *Beckh. Auk*, ii. p. 141 (1885).

Chrysomitris psaltria, var. psaltria, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 574 (1874).

Astragalinus psaltria, *Coues, Check-list*, p. 50 (1882); *id. Key N. Amer. B.* 2nd ed. p. 355 (1884).

Spinus psaltria, *Stejneger, Auk*, iii. p. 362 (1884); *A. O. U. Check-list N. Amer. B.* p. 261 (1886); *Everm. Auk*, 1886, p. 182.

Adult male. General colour above olive-green, slightly mottled

with white bases to the feathers of the lower back and rump; lesser wing-coverts black; median and greater coverts blackish, edged with olive-green, the ends of the latter series white; bastard-wing, primary-coverts, and quills blackish, edged with olive-green, the inner primaries white at the base and margined with hoary white, the secondaries broadly edged with white, especially the innermost; upper tail-coverts black, edged with olive-green; tail-feathers black, edged with whitish, the three outer feathers with a large white patch on the inner web; crown of head black, forming a cap; ear-coverts olive-green; lores and feathers below the eye yellow; cheeks and under surface of body bright yellow, greenish on the sides of the body and flanks, the latter slightly streaked with dusky; thighs ashy whitish; under tail-coverts pale yellow; under wing-coverts and axillaries white, with dusky bases, the latter edged with yellow; quills below dusky blackish, white on the inner web and at the base: "bill flesh-coloured, the upper mandible dusky towards the end; feet and claws reddish brown" (*Audubon*). Total length 4·2 inches, culmen 0·35, wing 2·65, tail 1·7, tarsus 0·5.

Adult female. Browner than the male and not so green, the head without any black and resembling the back; wing-coverts and inner secondaries tipped with dull white, the latter rather broadly margined; white wing-spot very small, a few of the inner primaries white at the base of the outer web; ear-coverts olive like the head; cheeks and under surface of body dull yellowish, a little brighter on the throat and abdomen. Total length 4 inches, culmen 0·35, wing 2·5, tail 1·6, tarsus 0·5.

Between *C. psaltria*, with its olive-green back, and *C. mexicana*, with its black back, every intermediate form is said to occur, but apparently only in the intermediate habitat of the two species. It seems to me that these intermediate forms must be the result of hybridization; and I therefore keep the Rocky-Mountain Siskin and the Mexican Siskin distinct. *Cf.* Baird, Brewer, and Ridgway (*l. c.*), and Salvin and Godman (*Biologia Centr.-Amer. l. c.*).

Hab. Western United States, from the plains to the Pacific, and from Colorado and Utah southward to Sonora (A. O. U. Check-list, *l. c.*).

a. ♂ ad. sk.	Western North America.	Sclater Coll.
b, c. Imm. sk.	California.	Purchased.
d. ♀ ad. sk.	Red Bluff, N. California, May 15, 1884 (*C. H. Townsend*; Sm. no. 98306).	U. S. Nat. Museum [P.].
e. ♂ imm. sk.	Cohuilla Valley, California, March 4, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
f. ♂ ad. sk.	Hayward's, California, March 27, 1881 (*W. O. Emerson*).	R. B. Sharpe, Esq. [P.].
g. Ad. sk.	Pueblo, Cal., July 27, 1874 (*C. E. Aiken*; Sm. no. 69454).	U. S. Nat. Museum [P.].
h. Ad. sk.	Fort Tejon, California, Aug. 9, 1875 (*H. W. Henshaw*; Sm. no. 72092).	U. S. Nat. Museum [P.].
i, k. ♀ ad. sk.	Fort Tejon, July 1857 (*J. Xantus*; Sm. nos. 25640, 25633.)	Salvin-Godman Coll.

Subsp. *a*. Chrysomitris arizonæ.

Chrysomitris mexicana, var. arizonæ, *Coues, Proc. Philad. Acad.* 1866, p. 82; *Cooper, B. Calif.* p. 170 (1870).

Chrysomitris psaltria, var. arizonæ, *Coues, Key N. Amer. B.* p. 132 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 476 (1874); *Coues, B. N.-West*, p. 117 (1874); *Hensh. Rep. Expl. 100th Merid.* p. 245, pl. iv. fig. 1 (1875).

Chrysomitris psaltria arizonæ, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 177, 216 (1880).

Astragalinus psaltria arizonæ, *Coues, Check-list*, p. 50 (1882); *id. Key N. Amer. B.* 2nd ed. p. 355 (1884).

Spinus psaltria arizonæ, *Stejneger, Auk*, ii. p. 362 (1884); *A. O. U. Check-list N. Amer. B.* p. 261 (1886).

An intermediate form between the green-backed *C. psaltria* and the black-backed *C. mexicana*. Dr. Coues says that the olive and black on the upper parts are mixed in about equal amounts.

Hab. Southern New Mexico and Southern Arizona southward into Northern Mexico (*A. O. U. Check-list*).

8. Chrysomitris mexicana.

Carduelis mexicanus, *Swains. Phil. Mag.* i. p. 435 (1827); *Wagler, Isis*, 1831, p. 525.

Fringilla melanoxantha, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 56.

Chrysomitris mexicana, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* i. p. 516 (1850); *Scl. P. Z. S.* 1855, p. 65, 1858, p. 303; *Baird, B. N. Amer.* p. 423; *id. U. S. & Mex. Bound. Surv.* ii. *Birds*, p. 14, pl. 16. fig. 1 (1859); *Scl. P. Z. S.* 1859, pp. 365, 380; *id. & Salv. Ibis*, 1859, p. 19, 1860, p. 34; *Lawr. Ann. Lyc. N. Y.* vii. p. 331 (1861); *Scl. Cat. Amer. B.* p. 124 (1862); *id. & Salv. P. Z. S.* 1864, p. 353; *Dugès, La Nat.* i. p. 140 (1868); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 550 (1869); *Scl. Ibis*, 1869, p. 314; *Salv. P. Z. S.* 1870, p. 190; *Cooper, B. Calif.* p. 169 (1870); *Grayson, Pr. Bost. Soc. N. H.* xiv. p. 282 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 478, pl. 22. figs. 12, 13 (1874); *Salv. Cat. Strickl. Coll.* p. 214 (1882); *Boucard, P. Z. S.* 1883, p. 445; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 431 (1886).

? Carduelis yarrelli ♀, *Audub. B. Amer.* 8vo, iii. pl. 184. fig. 2 (1841).

Fringilla texensis, *Giraud, Descr. Sixteen New Sp. Amer. B.* pl. 5. fig. 1 (1841).

Astragalinus mexicanus, *Cab. Mus. Hein.* Th. i. p. 159; *id. J. f. O.* 1861, p. 7.

Chrysomitris melanoxantha, *Licht. Nomencl. Av.* p. 46 (1854).

? Astragalinus columbianus, *Cab. J. f. O.* 1861, p. 94.

Chrysomitris columbianus (*nec Lafr.*), *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868); *Frantz. J. f. O.* 1869, p. 302.

Fringilla columbiana, *Gray, Hand-l. B.* ii. p. 81, no. 7186 (1870).

Chrysomitris psaltria, var. mexicana, *Coues, Key N. Amer. B.* p. 133 (1872); *id. B. N.-West*, p. 117 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 278 (1874).

Astragalinus psaltria mexicanus, *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 177 (1880); *Coues, Check-list*, p. 51 (1882); *id. Key N. Amer. B.* 2nd ed. p. 355 (1884).

Spinus psaltria mexicanus, *Stejneger, Auk*, ii. p. 362 (1884); *A. O. U. Check-list N. Amer. B.* p. 261 (1886).

Adult male. General colour above glossy blue-black, slightly varied with olive-yellow bases to the feathers of the hind neck and mantle; rump also mottled with white bases; wing-coverts and quills entirely black, the latter fringed with white at the ends, the inner secondaries with a large white spot at the end of the outer web, the inner greater coverts also having a small white spot at the tip; inner primaries white at the base, forming a speculum; tail black, the three outer feathers with a large white mark on the inner web; crown of head, lores, upper edge of eyelid, and ear-coverts black, like the head; cheeks, feathers below the eye, and lower edge of eyelid, as well as the entire under surface of body, bright yellow, a little paler on the abdomen and under tail-coverts; a black patch on each side of the upper breast; thighs yellow; under wing-coverts and axillaries black, edged with ashy white, the latter tinged with yellow; quills below blackish, white at the base of the inner web. Total length 4·4 inches, culmen 0·35, wing 2·5, tail 1·55, tarsus 0·5.

Adult female. Different from the male. General colour above dull olive-yellow, the lower back and rump a little greener; lesser wing-coverts like the back; remainder of the coverts and quills dusky brown, edged with olive, whitish at the end of the greater coverts, and with a large white spot on the outer web of the secondaries; a small white alar speculum at the base of the primaries; tail-feathers dusky brown, the two outer feathers with a large white patch on the inner web; crown of head like the back; feathers round the eye and lores a little yellower; ear-coverts olive-brown, washed with yellow; cheeks and under surface of body yellow, brighter on the abdomen; sides of body and flanks rather browner; under wing-coverts and axillaries dusky, edged with whitish. Total length 4 inches, culmen 0·35, wing 2·45, tail 1·55, tarsus 0·45.

The male from the Tres Marias Islands has a green back mixed with black, thus showing an approach to *C. psaltria* and *C. arizonæ*.

Hab. Valley of Lower Rio Grande in Texas southwards into Mexico, and thence through Central America to Panama.

a. Ad. st.	Mexico.	J. Phillips, Esq. [P.].
b, c. Ad. sk.	Mexico.	Purchased.
d, e. ♂ ♀ ad. sk.	Mexico.	Sclater Coll.
f. Ad. sk.	Jalapa, S. Mexico (*de Oca*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Tres Marias Islands, Feb. 21 (*A. Forrer*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Tres Marias Islands, April 21 (*A. Forrer*).	Salvin-Godman Coll.
i. [♂ ad.] sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
k. [♀ ad.] sk.	Mugeres Island, Dec. 1886 (*G. F. Gaumer*).	Salvin-Godman Coll.
l. [♂ ad.] sk.	Guatemala (*Constancia*).	Sclater Coll.

m. [♂ ad.] sk.	Dueñas, Guatemala (*O. (Salvin)*.	Sclater Coll.
n. [♂ ad.] sk.	Dueñas, Guatemala (*O. S. & F. D. G.*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Quezaltenango, Guatemala, Aug. 1862 (*O. S.*).	Salvin-Godman Coll.
p. [♀ ad.] sk.	Coban, Vera Paz, Nov. 1859 (*O. S.*).	Salvin-Godman Coll.
q. [♂ ad.] sk.	Coban, Jan. 1862 (*O. S.*).	Salvin-Godman Coll.
r. [♀ ad.] sk.	Guatemala.	G. U. Skinner, Esq. [C.].
s. [♂ ad.] sk.	Volcan de Cartago, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
t. [♀ ad.] sk.	Irazu district (*H. Rogers*).	Salvin-Godman Coll.
u, v. ♂ ♀ ad. sk.	San José, Costa Rica (*J. Carmiol*; Sm. nos. 41379, 41382).	Salvin-Godman Coll.
w. [♂ ad.] sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
x. ♂ ad. sk.	Calobre, Panama (*E. Arcé*).	Salvin-Godman Coll.
y. ♂ ad. sk.	Lion Hill Station, Panama (*J. McLeannan*).	Salvin-Godman Coll.

9. Chrysomitris colombiana.

Carduelis columbianus, *Lafr. Rev. Zool.* 1843, p. 292.
Chrysomitris nana, *Bp. Consp.* i. p. 516 (1850).
Astragalinus columbianus, *Cab. Mus. Hein.* Th. i. p. 159 (1850).
Chrysomitris columbiana, *Scl. P. Z. S.* 1855, p. 159; *Baird, B. N. Amer.* p. 423 (1858); *Scl. Cat. Amer. B.* p. 124 (1862); *Cass. Proc. Philad. Acad.* 1865, p. 93; *Scl. & Salv. P. Z. S.* 1868, p. 167; *Salv. P. Z. S.* 1870, p. 190; *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *id. P. Z. S.* 1875, p. 234, 1879, p. 508; *Tacz. P. Z. S.* 1879, p. 230, 1880, p. 199; *id. Orn. Pérou*, iii. p. 51 (1886); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 431 (1886).
Chrysomitris mexicana, var. columbiana, *Coues, Proc. Philad. Acad.* 1866, p. 82.
Fringilla columbiana, *Gray, Hand-l. B.* ii. p. 81, no. 7187 (1870).
Chrysomitris psaltria, var. columbiana, *Coues, Key N. Amer. B.* p. 133 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 471 (1874); *Coues, B. N.-West*, p. 117 (1874).

Adult male. Similar to *C. mexicana*, but distinguished by its entirely black tail: "bill blackish horn-colour, the lower mandible pale yellowish; feet horn-colour; iris dark brown" (*Stolzmann*). Total length 4 inches, culmen 0·35, wing 2·5, tail 1·5, tarsus 0·45.

Adult female. Similar to the female of *C. mexicana*. Total length 4 inches, culmen 0·4, wing 2·45, tail 1·45, tarsus 0·5.

Specimens from Peru and Venezuela have absolutely black tails, as have also most of the Colombian specimens. Among the latter, however, are some which show an irregular white mark on the outer tail-feathers. This mark is probably due to the interbreeding of *C. colombiana* and *C. mexicana* on the confines of their respective habitats.

Hab. Venezuela, Colombia, Ecuador, and Peru.

a. [♂ ad.] sk.	Bogotá, U. S. Colombia.	Salvin-Godman Coll.
b. [♂ ad.] sk.	Bogotá.	Gould Coll.
c, d. [♂ ♀ ad.] sk.	Bogotá.	Sclater Coll.
e. [♂ ad.] sk.	Sierra Nevada of Santa Marta (*F. Simons*).	Salvin-Godman Coll.
f, g. [♂ ♀ ad.] sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
h, i, k. ♂ ad. sk.	Retiro, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Retiro, Antioquia (*T. K. Salmon*).	Sclater Coll.
m. ♀ ad. sk.	Concordia, Antioquia (*T. K. Salmon*).	Sclater Coll.
n. [♂ ad.] sk.	Venezuela.	Mr. C. Dyson [C.].
o. ♂ ad. sk.	Merida, Venezuela (*A. Goering*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Caracas, Venezuela (*A. Goering*).	Sclater Coll.
q. [♂ ad.] sk.	Ecuador (*C. Buckley*).	Salvin-Godman Coll.
r. ♂ ad.; *s*. Juv. sk.	Tambillo, Peru (*Stolzmann*).	Sclater Coll.

10. Chrysomitris xanthogaster.

Chrysomitris xanthogastra, *Du Bus, Bull. R. Acad. Belg.* xxii. pt. 1, p. 152 (1855); *Scl. & Salv. P. Z. S.* 1870, p. 785; *Wyatt, Ibis*, 1871, p. 328; *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873, pt.); *iid. P. Z. S.* 1879, p. 508.

Chrysomitris bryanti, *Cass. Proc. Philad. Acad.* 1865, p. 91; *Lawr. Ann. Lyc. N. Y.* viii. p. 103 (1838); *Frantz. J f. O.* 1869, p. 302.

Fringilla columbiana, pt., *Gray, Hand-l. B.* ii. p. 81, no. 7187 (1870).

Fringilla bryanti, *Gray, t. c.* p. 81, no. 7191 (1870).

Chrysomitris xanthogaster, *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 430, tab. xxxi. fig. 3 (1886).

Adult male. General colour above uniform black, including the whole of the wing-coverts, bastard-wing, and primary-coverts; quills black, yellow at the base, with black shafts, the black increasing in the region of the shafts on the secondaries, the innermost of which are entirely black; upper tail-coverts and centre tail-feathers black, the remainder yellow for the basal half; head all round, sides of neck, and entire throat black; remainder of under surface yellow, greener on the sides of body and flanks; thighs black; under tail-coverts yellow; under wing-coverts and axillaries yellow, the former with blackish bases: quills below blackish, yellow towards the base of the inner web. Total length 4·5 inches, culmen 0·4, wing 2·6, tail 1·5, tarsus 0·6.

Adult female. Different from the male. General colour above dull olive-green; lesser wing-coverts like the back; median and greater coverts dusky blackish, tipped with pale olive-green, whitish at the ends; bastard-wing, primary-coverts, and quills dusky blackish, fringed with pale olive-green, whitish at the ends of the secondaries; upper tail-coverts like the back; tail-feathers dusky blackish, edged with olive-green; crown of head like the back; lores olive-yellow: sides of face olive-greenish, a little yellower on

the fore part of the cheeks; throat and under surface of body brighter olive-yellow, paler on the abdomen and under tail-coverts; thighs ashy; under wing-coverts and axillaries ashy, fringed with olive-yellow; quills below dusky; ashy along the inner web. Total length 4 inches, culmen 0·4, wing 2·35, tail 1·45, tarsus 0·45.

Hab. From Costa Rica to Colombia, Ecuador, and Venezuela.

a. ♂ ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Costa Rica (*J. Carmiol*)	Sclater Coll.
c. ♂ ad. sk.	Costa Rica (*Van Patten*).	Sclater Coll.
d. ♂ imm. sk.	Costa Rica (*Van Patten*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Frailes, Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.
f. ♀ imm. sk.	Dota, Costa Rica, June 25, 1862 (*J. Carmiol*; Sm. no. 35301).	Salvin-Godman Coll.
g. [♂ ad.]; *h.* Juv. sk.	Bogotá.	Sclater Coll.
i, k. [♂ ♀] ad. sk.	Bogotá.	Salvin-Godman Coll.
l. ♀ ad. sk.	Canuto, Magdalena Valley (*C. W. Wyatt*).	Sclater Coll.
m. ♂ ad. sk.	Canuto (*C. W. Wyatt*).	Salvin-Godman Coll.
n, o. ♂ ♀ ad. sk.	Santa Elena, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Venezuela (*C. Spence*).	Sclater Coll.
q. ♀ ad. sk.	Venezuela (*A. Goering*).	Sclater Coll.
r. [♂ ad.] sk.	Ecuador.	Salvin-Godman Coll.

11. Chrysomitris stejnegeri.

Chrysomitris xanthogastra (*nec Du Bus*), *Scl. & Salv. P. Z. S.* 1879, p. 607.

Adult male. Similar to *C. xanthogaster*, but rather larger, and distinguished by its yellow thighs, larger yellow wing-patch (the greater coverts being tipped with yellow), and whitish edgings to the end of the outer web of the inner secondaries. Total length 4 inches, culmen 0·45, wing 2·7, tail 1·55, tarsus 0·55.

Adult female, according to Mr. Buckley, is like the male, but with the colours not so bright. Total length 4 inches, culmen 0·4, wing 2·5, tail 1·55, tarsus 0·5.

If the similarity in the colour of the sexes is really correctly determined, it is another proof of the difference between *C. stejnegeri* and *C. xanthogaster*, with which it has always been united.

In Dr. Sclater's collection is a Bolivian specimen collected by Mr. D. Forbes and marked a female (apparently by Dr. Sclater himself), which is dark olive-green above with some yellow spots on the crown; the head and sides of face are dingy greenish, blacker on the lores and region of the eye; wing-coverts greenish or edged with the latter colour; otherwise the wing marked as in the male but more dingy black, the greater coverts being tipped with yellow; under surface of body yellow, the throat being dull greenish. This seems to me more likely to be the plumage of the adult female, and

I think Mr. Buckley's identification must be wrong. In either case the plumage of the hen bird is very different from that of the female of *C. xanthogaster*.

Hab. Bolivia.

a, b. ♂ ♀ ad. sk.	Bolivia (*D. Forbes*).	Sclater Coll.
c. ♂ ad.; *d.* [♀ ad.] sk.	Sorata, Bolivia (*C. Buckley*).	Sclater Coll.
e. ♂ ad. sk.	Sorata, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Nairapi, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

12. Chrysomitris uropygialis.

Chrysomitris uropygialis, *Scl. Cat. Amer. B.* p. 125 (1862); *Cass. Proc. Philad. Acad.* 1865, p. 91; *Scl. P. Z. S.* 1867, pp. 332, 338; *id. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Tacz. Orn. Pérou*, iii. p. 54 (1886).

Fringilla uropygialis, *Gray, Hand-l. B.* ii. p. 81, no. 7190 (1870).

Adult male. General colour above black, the feathers margined with yellow; lower back and rump bright yellow; lesser and median coverts like the back, and similarly margined; greater coverts black, broadly tipped with yellow; bastard-wing and primary-coverts black; quills black, fringed with white at the ends, rather more broadly on the inner secondaries, which are broadly edged with yellow towards the ends; all the quills yellow at base, except the innermost secondaries, which are black to the base; shorter upper tail-coverts yellow, the longer ones black, fringed with yellow; tail-feathers black, all but the centre ones yellow for the basal two thirds; head all round, sides of neck, and throat black; remainder of under surface of body bright yellow, greener on the sides of body and flanks, the latter mixed with blackish; thighs yellow with dusky bases; under tail-coverts, under wing-coverts, and axillaries yellow, the edge of the wing mottled with dusky bases; quills below blackish, yellow towards the base of the inner web. Total length 4·6 inches, culmen 0·4, wing 3·25, tail 1·9, tarsus 0·65.

None of the specimens in the Museum have an indication of the female sex on their labels, and the sexes are probably alike in colour. The extent of the yellow margins to the dorsal feathers varies greatly; but I have no evidence to show that this is a seasonal peculiarity, and it may be that the younger birds or the females have the back more obscured by these pale margins than the fully adult males.

Hab. Chili, extending to Southern Peru.

a. ♂ ad. sk.	Prov. Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
b, c. Ad. sk.	Chili.	Dr. Leybold [C.].
d. Ad. sk.	Chili.	Sclater Coll. (Type of species.)
e. Ad. sk.	Chili (*Bridges*).	Sclater Coll.
f. Ad. sk.	Chili.	Mr. Bridges [C.].

g. [♂ ad.] st.	Chili.	Mr. Bridges [C.].
h. Ad. sk.	Chili.	Purchased.
i. Ad. sk.	Chili (*E. C. Reed*).	Salvin-Godman Coll.

13. Chrysomitris atrata.

Carduelis atratus, *D'Orb. & Lafr. Syn. Av.* p. 83 (1837); *D'Orb. Voy. Amér. Mérid.* p. 364, pl. 48. fig. 2 (1835–44).
Chrysomitris atrata, *Bp. Consp.* i. p. 515 (1850); *Licht. Nomencl. Av.* p. 46 (1854); *Cass. in Gilliss' U. S. Astr. Exped.* p. 181 (1855); *Burm. Reis. La Plata-St.* ii. p. 490 (1861); *Scl. Cat. Amer. B.* p. 125 (1862); *Cass. Proc. Philad. Acad.* 1865, p. 91; *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Tacz. P. Z. S.* 1874, p. 523; *Scl. & Salv. P. Z. S.* 1879, p. 607; *Tacz. Orn. Pérou*, iii. p. 53 (1886).
Fringilla atrata, *Gray, Hand-l. B.* ii. p. 81, no. 7189 (1870).

Adult male. General colour above sooty black; wing-coverts black; the greater coverts tipped with yellow; bastard-wing and primary-coverts black; quills yellow at base, black at the ends, the inner secondaries entirely black; upper tail-coverts and centre tail-feathers black, the rest yellow at base, black at the ends; head black all round as well as the entire under surface, excepting the abdomen and under tail-coverts, which are yellow; thighs pale yellow; under wing-coverts and axillaries yellow, the lower primary-coverts black; quills below blackish, yellow at base. Total length 4·8 inches, culmen 0·4, wing 3·15, tail 1·9, tarsus 0·6.

Adult female (?). Differs from the male only in being more brownish black; the median as well as the greater coverts tipped with pale yellow, and the quills edged with yellowish white near the end of the outer web; the yellow on the under surface is rather paler and extends up to the fore neck, but is mottled with brown on the breast. Total length 4·8 inches, culmen 0·4, wing 3·2, tail 2, tarsus 0·6.

The above may be the young bird, as the Museum does not contain any specimens with the female sex identified by the collector.

Hab. From Mendoza to Bolivia and Peru.

a, *b*, *c*. ♂ ad.; *d*. [♀? ad.] sk.	Bolivia.	Mr. Bridges [C.].
e. ♂ ad. sk.	Bolivia (*Bridges*).	Sclater Coll.
f. ♂ ad. sk.	Mendoza.	Mr. Weisshaupt [C.].
g. ♂ ad. sk.	Mendoza (*Weisshaupt*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Pitumarca, Peru, Aug. 2, 1868 (*H. Whitely*).	Salvin-Godman Coll.

14. Chrysomitris spinus.

The Aberdivine, *Albin, Nat. Hist. B.* iii. p. 71, pl. 76 (1740).
Le Tarin, *Briss. Orn.* iii. p. 65 (1760); *Daubent. Pl. Enl.* iv. pl. 485. fig. 1; *Montb. Hist. Nat. Ois.* iv. p. 221 (1778).

Fringilla spinus, *Linn. Syst. Nat.* i. p. 322 (1766); *Temm. Man. d'Orn.* i. p. 371 (1820); *Roux, Orn. Prov.* pls. 95, 96 (1825); *Naum. Vög. Deutschl.* v. pl. 125 (1826); *Werner, Atlas, Granivores*, pl. 50 (1827); *Crespon, Orn. Gard.* p. 261 (1840); *Keys. u. Blas. Wirb. Eur.* p. xli (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 186 (1840); *Selys-Longch. Faun. Belge*, p. 72 (1842); *Yarr. Brit. B.* i. p. 496 (1843); *Schl. Rev. Crit.* p. lxiii (1844); *Gray, Gen. B.* ii. p. 371 (1849); *Kjærb. Danm. Fugle*, pl. xxviii A. fig. 1 (1852); *Schl. Vog. Nederl.* pl. 168 (1854); *Sundev. Svensk. Fogl.* pl. iv. figs. 3, 4 (1856); *Schl. Dier. Nederl.* pl. 16. figs. 13, 14 (1861); *Swinh. Ibis*, 1861, p. 335; *Gray, List Brit. B.* p. 96 (1863); *More, Ibis*, 1865, p. 128; *Borggr. Vogelf. Norddeutschl.* p. 75; *Keulem. Onze Vogels*, pl. 33 (1869); *Fritsch, Vög. Eur.* pl. 17. figs. 10, 11 (1870); *Elwes & Buckley, Ibis*, 1870, p. 193; *Gray, Hand-l. B.* ii. p. 81, no. 7177 (1870); *Harting, Handb. Brit. B.* p. 27 (1872); *Danf. & Harvie-Brown, Ibis*, 1875, p. 413; *Fallon, Ois. Belg.* p. 104 (1875); *Seebohm, Ibis*, 1882, pp. 218, 378; *id. Hist. Brit. B.* ii. p. 92 (1884).

Emberiza spinus, *Scop. Ann.* i. p. 145 (1769).

The Siskin, *Penn. Brit. Zool.* p. 109, pl. 108. fig. 5 (1776); *Lath. Gen. Syn.* ii. pt. 1, p. 289 (1783).

Fringilla fasciata, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 165 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 255.

Spinus viridis, *Koch, Baier. Zool.* p. 235 (1816).

Linaria spinus, *Leach, Syst. Cat. Mamm. &c. Brit. Mus.* p. 15 (1816).

Serinus spinus, *Boie, Isis*, 1822, p. 555.

Carduelis spinus, *Steph. in Shaw's Gen. Zool.* xiv. p. 33 (1826).

Chrysomitris spinus, *Boie, Isis*, 1822, p. 322; *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* i. p. 515 (1850); *Jaub. & Barth.-Lapomm. Rich. Orn.* p. 147 (1859); *Powys, Ibis*, 1860, p. 138; *Swinh. Ibis*, 1861, p. 267; *Blakist. Ibis*, 1862, p. 327; *Giglioli, Ibis*, 1865, p. 57; *Whitely, Ibis*, 1867, p. 201; *Drake, t. c.* p. 427; *Degl. et Gerbe, Orn. Eur.* i. p. 281 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 152 (1867); *Gould, B. Gt. Br.* iii. pl. 37 (c. 1870); *Salvad. Faun. Ital., Uce.* p. 154 (1871); *Swinh. P. Z. S.* 1871, p. 385; *R. Gray, B. West Scotl.* p. 146 (1871); *Saunders, Ibis*, 1871, p. 220; *Godman, Ibis*, 1872, p. 212; *Alston & Harvie-Brown, Ibis*, 1873, p. 64; *Brooke, t. c.* p. 247; *Swinh. Ibis*, 1875, p. 120; *Irby, B. Gibr.* p. 123 (1873); *Dresser, B. Eur.* iii. p. 541, pl. 169 (1876); *David & Oust. Ois. Chine*, p. 337 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 245; *iid. B. Japan*, p. 173 (1882); *B. O. U. List Brit. B.* p. 48 (1882); *Seebohm, Ibis*, 1883, p. 9; *Irby, t. c.* p. 183; *Jouy, Proc. U. S. Nat. Mus.* vi. p. 297 (1883); *Saunders, Ibis*, 1884, p. 375; *Blakist. Amended List B. Japan*, p. 18 (1884); *Radde, Orn. Cauc.* p. 177 (1884); *Whitehead, Ibis*, 1885, p. 39.

Spinus alnorum, *Brehm, Vög. Deutschl.* p. 284 (1831).

Spinus medius, *Brehm, Vög. Deutschl.* p. 285 (1831).

Spinus betulorum, *Brehm, Vög. Deutschl.* p. 286 (1831).

Carduelis spinus, *Gould, B. Eur.* iii. pl. 197 (1837); *Macgill. Hist. Brit. B.* i. p. 400 (1837); *Hewits. Eggs Brit. B.* i. p. 163, pl. 44. fig. 2 (1846); *Thomps. B. Irel.* i. p. 265 (1849); *Wright, Ibis*, 1864, p. 54; *Smith, Ibis*, 1868, p. 445; *Newton, ed. Yarr. Brit. B.* ii. p. 126 (1876).

Fringilla (Acanthis) spinus, *Middend. Sibir. Reis.* p. 299 (1851). *Radde, Reise Sibir.* p. 187 (1863).

Spinus obscurus, *Brehm. Vogelf.* p. 108 (1855).

Ligurinus spinus, *Doderl. Avif. Sicil.* p. 82 (1869).

Chrysomitris dybowskii, *Tacz. J. f. O.* 1876, p. 199; *id. Bull. Soc. Zool. France*, i. p. 180 (1876).

Adult male. General colour above yellowish green, with slightly indicated dusky streaks to the feathers; rump brighter yellow, shaded with dusky greenish, the dark shaft-stripes very distinct on the upper part of the rump: lesser wing-coverts dark yellow; median coverts rather brighter yellow; greater coverts black, edged and tipped with yellow, brighter at the ends and forming a bar; bastard-wing blackish edged with yellow, whitish at the ends; primary-coverts dusky blackish, fringed with greenish yellow; quills blackish, the primaries margined with bright yellow, the inner ones with a bright yellow base to the inner web; secondaries yellow at base and edged with yellow near the end of the outer web, the innermost ones blackish, edged with pale yellow: upper tail-coverts yellowish green; tail-feathers blackish, edged with yellow, all but the centre feathers yellow at the base; crown of head black: lores blackish; a broad eyebrow of bright yellow, shaded posteriorly with green; eyelid, sides of face, and ear-coverts yellow, the latter shaded with green above; cheeks, throat, and breast bright yellow; abdomen whitish; sides of body and flanks dull yellowish mixed with ashy and broadly streaked with black: thighs ashy whitish; under tail-coverts white, washed with yellow, with blackish centres to the feathers; under wing-coverts and axillaries pale yellow, the former with dusky bases; quills below dusky, yellow along the inner edge. Total length 4·5 inches, culmen 0·45, wing 2·7, tail 1·7, tarsus 0·55.

Some males, apparently very old birds, have the feathers at the base of the bill and the chin black.

Adult female. Different from the male. General colour above ashy brown, washed with yellow and streaked with blackish down the centre of the feathers; rump bright yellow, washed on the sides with green and streaked with black; wing-coverts as in the male; quills blackish, fringed with greenish yellow, but the yellow bases to the quills, which are conspicuous in the male, reduced to a great degree, and in the case of the secondaries hidden by the greater coverts; upper tail-coverts dull olive-yellowish; tail-feathers dark brown, edged with yellow, all but the centre feathers yellow at the base; crown of head like the back but more ashy, and with smaller blackish centres, not very distinct; lores and base of forehead hoary; a narrow yellow eyebrow; eyelid yellowish; ear-coverts and cheeks yellowish, shaded with dusky brown: under surface of body white, tinged with yellow on the lower throat; sides of body and flanks more distinctly washed with yellow and rather broadly streaked with black centres to the feathers; thighs ashy whitish; under tail-coverts white, streaked with black centres to the feathers; under wing-coverts and axillaries pale yellow, the coverts with dusky bases; quills below dusky, ashy yellowish along the inner edge. Total length 4·2 inches, culmen 0·45, wing 2·7, tail 1·75, tarsus 0·55.

The only change apparent in the breeding-season is that the ashy brown on the upper surface gets somewhat worn off, and the yellow is more conspicuous, the head becoming somewhat more uniformly dusky, but never blackish as in the male.

Young birds resemble the old female, but are browner, with less yellow, so that the rump, eyebrow, and sides of face are whitish. The upper surface of the body is thickly mottled with blackish mesial streaks on all the feathers, and the under surface is white, thickly spotted with blackish brown, the spots being triangular on the throat and breast, and longitudinal on the sides of the body and flanks.

Hab. The whole of Europe and Northern Asia, across Siberia to Japan.

a. ♀ imm. sk.	Orkneys (*J. Dunn*).	R. B. Sharpe, Esq. [P.].
b, *c*. ♂ ♀ ad. sk.	Cookham, Berks, February.	Gould Coll.
d, *e*, *f*, *g*. ♂ ad. sk.	Cookham, Feb. 24, 1874.	R. B. Sharpe, Esq. [P.].
h, *i*. ♂ ad.; *k*. ♀ ad. sk.	Cookham, Dec. 1879.	R. B. Sharpe, Esq. [P.].
l, *m*, *n*. ♂ ad. st.	Cookham.	Mr. W. Briggs [P.].
o. ♂ ad. st.	Turnham Green.	Mr. J. Baker [C.].
p. ♂ ad. sk.	Near London.	Montagu Coll.
q, *r*. ♂ ♀ ad. sk.	Lancing, Sussex, Nov. 1883.	R. B. Sharpe, Esq. [P.].
s, *t*, *u*. ♂ ad.; *v*–*y*. ♀ ad. sk.	Avington, Hants, Feb. 1880.	R. B. Sharpe, Esq. [P.].
z. ♂ ad. sk.	Norway, June 1866 (*J. Baker*).	Salvin-Godman Coll.
a'. ♀ ad. sk.	Norway, April 14, 1874 (*R. Collett*).	Christiania Mus. [P.].
b'. ♀ ad. sk.	Norway, May 16, 1876 (*R. Collett*).	Christiania Mus. [P.].
c'. ♀ ad. sk.	Norway, June 3, 1877 (*R. Collett*).	Christiania Mus. [P.].
d'. ♀ juv. sk.	Norway, Aug. 25, 1878 (*R. Collett*).	Christiania Mus. [P.].
e'. ♂ ad. sk.	Norway, Nov. 18, 1883 (*R. Collett*).	Christiania Mus. [P.].
f', *g'*. ♂ ♀ ad. sk.	Belgium, Dec. 12, 1870.	Brussels Museum [P.].
h'. ♂ ad. sk.	Leiden, Holland, July 16, 1878.	R. B. Sharpe, Esq. [P.].
i'. ♂ ad. st.	Mongeron, Seine-et-Oise, France, March (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
k'. ♀ ad. sk.	Guiksu, Asia Minor, Oct. 18, 1866 (*T. Robson*).	Hume Coll.
l', *m'*. ♂ ♀ ad. sk.	Hakodadi, Japan, Dec. 24, 1864.	Henry Whitely, Esq. [C.].
n'. ♂ ad. sk.	Hakodadi, Nov. 22, 1865 (*H. Whitely*).	Gould Coll.
o'. ♀ ad. sk.	Yokohama, Japan.	Prof. Milne [C.].
p'. Skeleton.	England.	Mr. Daniells.
q', *r'*. Skulls.	S. Germany.	Dr. Günther [C.].

15. Chrysomitris barbata.

Fringilla barbata, *Molina, Saggio Hist. Nat. Chile*, p. 247 (1782); *Gray, Hand-l. B.* ii. p. 82, no. 7197 (1870).
Carduelis stanleyi, *Audub. B. Amer.* iii. p. 137, pl. 185 (1841, = ♀).
Chrysomitris magellanica (*nec V.*), *Darwin, Voy. 'Beagle,' Birds*, p. 97 (1841); *Scl. P. Z. S.* 1861, p. 40; *Abbott, Ibis*, 1861, p. 154.
Chrysomitris campestris (*nec Spix*), *Gould, P. Z. S.* 1843, p. 113; *Gay, Hist. Chile*, i. p. 352 (1847).
Fringilla stanleyi, *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 82, no. 7198 (1870).
Chrysomitris marginalis, *Bp. Consp.* i. p. 160 (1850); *Cab. Mus. Hein.* Th. i. p. 160 (1850); *Cass. in Gilliss' U.S. Astr. Exped.* p. 181, pl. 17 (1855); *Burm. Reise La Plata-St.* ii. p. 290 (1861).
Hypacanthus stanleyi, *Cab. Mus. Hein.* Th. i. p. 161, note (1850).
Crithagra flavospecularis, *Hartl. Naum.* 1853, p. 213.
Chrysomitris noveboracensis, *Licht. Nomencl.* p. 46 (1854).
Chrysomitris barbata, *Philippi, Arch. f. Naturg.* xxvi. p. 28 (1860); *Scl. Cat. Amer. B.* p. 125 (1862, pt.); *Cass. Proc. Philad. Acad.* 1865, p. 90; *Salv. P. Z. S.* 1867, p. 322; *Scl. & Salv. Ibis*, 1868, p. 185, 1870, p. 499.

Adult male. General colour above yellowish green, the mantle and upper back slightly mottled with dusky-blackish centres to the feathers; lower back and rump clearer olive-yellow; lesser wing-coverts like the back; median and greater coverts yellow, brighter on the margins of the latter series, which have conspicuous black bases; bastard-wing and primary-coverts black; quills black, the primaries edged with yellow, and bright yellow at the base of the outer web, forming a speculum, the secondaries margined with yellow near the ends, the bases yellow, followed by black in the centre, forming a broad double band; upper tail-coverts dull olive-yellow, edged with ashy grey; tail-feathers blackish edged with ashy grey, yellow towards the base, the inner web margined with whitish; base of tail entirely yellow; crown of head black, with slightly indicated olive margins to the feathers; lores ashy whitish; sides of hinder crown and sides of neck olive-yellow; sides of face and ear-coverts dull olive-yellow, washed with ashy; cheeks and under surface of body bright yellow, the throat black in the centre; abdomen white; sides of body slightly greener; the flanks washed with ashy; thighs ashy, washed with yellow; under tail-coverts bright yellow, the long ones ashy whitish with black centres; under wing-coverts and axillaries yellow, with dusky bases; quills below dusky, yellow towards the base of the inner web. Total length 5 inches, culmen 0·45, wing 2·9, tail 1·85, tarsus 0·6.

Adult female. Differs from the male in being much more dusky in colour, the markings of the wing being much less pronounced. The black of the crown is wanting, the head being like the back, and streaked with dusky in the same manner; the base of the forehead is pale yellow, united to a broad eyebrow which joins the side of the neck, which is also pale yellow; ear-coverts dusky olive; cheeks and under surface of body pale yellow, washed with ashy;

abdomen white, the sides of the body olive-yellow, the lower flanks brownish. Total length 5·3 inches, culmen 0·45, wing 3, tail 2, tarsus 0·6.

Hab. Falkland Islands, Patagonia, and Chili.

a. ♂ imm. sk.	Falkland Islands (*Capt. Abbott*).	Sclater Coll.
b,c. ♂ ♀ ad. sk.	Straits of Magellan.	Old Coll.
d. ♀ ad. sk.	Tierra del Fuego.	Sir W. Burnett and Admiral Fitzroy.
e. ♂ ad. sk.	Chili (*E. C. Reed*).	Salvin-Godman Coll.
f. ♂ ad. st.	Maldonado, Chili (*C. Darwin*).	Zoological Society.
g. [♂ ad.] sk.	South America.	Sclater Coll.

16. Chrysomitris icterica*.

L'Olivarez, *Montb. Hist. Nat. Ois.* iv. p. 232 (1778).
Gafarron, *Azara*, *Apunt.* i. p. 483 (1802).
Fringilla magellanica*, *Vieill. Nour. Dict. d'Hist. Nat.* xii. p. 168 (1817, *nec Vieill.* 1805); *Bonn. et Vieill. Enc. Méth.* iii. p. 983 (1823); *Neuwied, Beitr. Naturg. Bras.* iii. p. 620 (1830); *Audub. B. Amer.* pl. 394; *id. Orn. Biogr.* v. p. 46 (1839); *Gray, Hand-l. B.* ii. p. 82, no. 7195 (1870).
Fringilla icterica, *Licht. Verz. Doubl.* p. 26 (1823).
Fringilla campestris, *Spix, Av. Bras.* p. 48, pl. 61. fig. 3 (1824); *Gray, Gen. B.* ii. p. 37 (1849).
Carduelis magellanicus, *Audub. Syn.* p. 116 (1839); *id. B. Amer.* 8vo, iii. p. 133, pl. 182 (1841).
Chrysomitris magellanica (*nec V.*), *Hartl. Ind. Azara*, p. 9 (1847); *Gay, Hist. Chile*, i. p. 352 (1847); *Bp. Consp.* i. p. 516 (1850); *Cab. Mus. Hein.* Th. i. p. 160 (1850); *Burm. Th. Bras.* iii. p. 255 (1856); *Baird, B. N. Amer.* p. 419 (1858); *Burm. Reis. La Plata-St.* ii. p. 489 (1861); *Cass. Proc. Philad. Acad.* 1865, p. 92; *Durnf. Ibis*, 1876, p. 159; *Gibson, Ibis*, 1880, p. 30; *Salv. t. c.* p. 355; *id. Cat. Strickl. Coll.* p. 213 (1882).
Chrysomitris icterica, *Scl. Cat. Amer. B.* p. 125 (1862, pt.); *Pelz. Orn. Bras.* p. 231 (1871); *Berlepsch & Ihering, Zeitschr. ges. Orn.* ii. p. 124 (1885).
Chrysomitris barbata (*nec Mol.*), *Scl. & Salv. P. Z. S.* 1868, p. 140; *iid. Nomencl. Av. Neotr.* p. 34 (1873, pt.); *Durnf. Ibis*, 1877, p. 172; *White, P. Z. S.* 1882, p. 600.
Chrysomitris notata (*nec Du Bus*), *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 177 (1880)†.

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* I have not adopted the name *magellanica* for any of the South-American Siskins, as at least four species have been called by that name. In the first place it conveys a wrong impression, as the only Siskin supposed to occur in the Straits of Magellan is *C. barbata*, and, secondly, I am convinced that the bird figured by Vieillot in his 'Oiseaux Chanteurs' is the long-billed Guiana form. If the name of *magellanica* is to be revived, it must be used for the Brazilian race, allowing that Vieillot was justified in transferring his own title from the Guiana form figured by him in 1805 to the Paraguayan form, the 'Gafarron' of Azara, which he called *F. magellanica* in 1817. I hope, however, that the readjustment of the names proposed in the present work will be acceptable to ornithologists, though it is doubtful whether the four races of *C. icterica* will be thought worthy of separation by every student of the genus.

† Audubon stated that he got the present species in Kentucky, and American ornithologists have admitted the Mexican *C. notata* into the list of North-Ame-

Astragalinus notatus, *Coues, Key N. Amer. B.* 2nd ed. p. 356 (1884). Spinus notatus, *Stejneger, Auk*, ii. p. 362 (1884); *A. O. U. Check-list N. Amer. B.* p. 262 (1886).

Adult male (Buenos Ayres, Dec. 31, 1876). General colour above uniform olive-yellow, the rump and upper tail-coverts bright yellow; lesser wing-coverts like the back; median and greater coverts black, tipped with bright yellow; bastard-wing and primary-coverts black; quills black, edged with yellow, the bases conspicuously bright yellow, the shafts only black; tail-feathers black, yellow at base; nape, sides of face, and throat black; hind neck and sides of neck bright yellow, almost forming a collar on the former; fore neck and under surface of body bright yellow, including the under tail-coverts, axillaries, under wing-coverts, and base of quills below: "bill, legs, and feet nearly black; iris dark wood-brown" (*H. Durnford*). Total length 4·5 inches, culmen 0·45, wing 2·9, tail 1·75, tarsus 0·55.

Adult female (Cosquin, July 18). Different from the male. Above greyish green, a little more yellow on the rump; upper tail-coverts olive edged with ashy; head like the back, but a little washed with yellow on the forehead; lesser wing-coverts like the back; median and greater coverts blackish, edged with ashy whitish; quills as in the male, but the yellow at the base less extended, and the secondaries edged with white near the ends of the outer web; tail-feathers dusky brown with concealed bases of pale yellow; sides of face and under surface of body ashy, washed with pale greenish yellow on the throat and under tail-coverts; the abdomen whitish, as also the long under tail-coverts. Total length 4·4 inches, culmen 0·4, wing 2·55, tail 1·65, tarsus 0·5.

The principal feature of this eastern and southern race of the Black-faced Siskin is the uniform back; but this character is not very positive, as some specimens (probably in seasonal plumage, as the bill is pale) have the back slightly mottled with dusky bases. The difference between *C. icterica* and *C. capitalis* will probably be found too slight to allow of their being separated even as races.

Hab. Brazil and Argentine Republic to Chili.

a. ♂ ad. st.	South America.	Purchased.
b. ♂ ad. sk.	Chili (*Leybold*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Salta, June 21, 1878.	Henry Durnford, Esq. [C.].
f. ♂ ad. sk.	Cosquin, Cordova, Argentine Republic, June 20, 1882 (*E. W. White*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Cosquin, July 18, 1882 (*E. W. White*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Buenos Ayres (*Haslehust*).	Salvin-Godman Coll.

rican birds on the supposition that Audubon really procured that species. The bird figured by the latter author is, however, undoubtedly *C. icterica* or *C. capitalis*, and is not the black-winged *C. notata*, which at present is not known to occur within North-American limits.

i. ♂ ad. sk.	Conchitas, Buenos Ayres (*W. H. Hudson*).	Sclater Coll.
k. ♂ ad. sk.	Campana, Buenos Ayres, Dec. 31, 1876.	Henry Durnford, Esq. [C.].
l, m. ♂ ♀ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
n. ♂ juv. sk.	San Paulo, Brazil (*Joyner*).	Salvin-Godman Coll.
o, p. ♂ ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.

Subsp. *a.* **Chrysomitris capitalis.**

Chrysomitris magellanica (*nec V.*), *Tsch. & Cab. Faun. Peruan.* p. 220 (1845–46).

Chrysomitris icterica (*nec Licht.*), *Scl. P. Z. S.* 1858, p. 552, 1860, p. 66; *id. Cat. Amer. B.* p. 125 (1862, pt.).

Chrysomitris capitalis, *Cab. J. f. O.* 1866, p. 160; *Scl. & Salv. P. Z. S.* 1867, p. 985; *Tacz. P. Z. S.* 1874, p. 522, 1879, p. 230, 1882, p. 17; *id. Orn. Pérou*, iii. p. 49 (1886).

Chrysomitris barbata (*nec Mol.*), *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873, pt.); *Salv. P. Z. S.* 1883, p. 422; *Berlepsch & Tacz. P. Z. S.* 1884, p. 294, 1885, p. 85.

Adult male. General colour above bright olive-yellow; the lower back and rump golden yellow; the upper back and mantle slightly mottled with black centres to the feathers; hind neck and sides of neck brighter yellow than the mantle; lesser wing-coverts like the back; median and greater coverts bright yellow with black bases, forming a band across the base of the latter; bastard-wing and primary-coverts black; quills black, bright yellow at the base of all but the innermost secondaries, which are edged with white at the tip and have a subterminal margin of yellow on the outer web, the primaries only fringed with white at the ends; upper tail-coverts olive-yellow, the long ones black edged with yellow; tail-feathers black, fringed with ashy grey; the entire tail yellow for the basal half; crown of head as far as the occiput, sides of face, ear-coverts, cheeks, and throat black; remainder of under surface of body golden yellow, the sides of body and flanks a trifle greener; lower abdomen whitish; thighs and under tail-coverts pale yellow, the long ones white at the end with a central streak of black; under wing-coverts and axillaries yellow, with dusky bases; quills below blackish, yellow for the greater part of the inner web. Total length 5 inches, culmen 0·4, wing 2·9, tail 1·7, tarsus 0·55.

Variation takes place in a series with regard to the brilliancy of the plumage, some, apparently younger birds, having a greener shade on the upper surface, and the yellow on the hind neck not so vivid.

Adult female. Differs from the male in the same way as the female of *C. icterica*, which it greatly resembles. The general tone of the plumage, however, is decidedly yellower both above and below, and not so ashy as in *C. icterica*. The pale yellowish edgings to the wing-coverts and inner secondaries are very broad. Total length 4·5 inches, culmen 0·4, wing 2·75, tail 1·65, tarsus 0·6.

Hab. Peru and Ecuador.

a. ♂ ad. sk.	Arequipa, Peru, June.	Henry Whitely [C.].
b,c. ♂ ♀ ad. sk.	Arequipa, Peru, June (*H. W.*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Arequipa, Peru, June (*H. W.*).	Sclater Coll.
e. ♀ ad. sk.	Arequipa, Peru, July 8 (*H. W.*).	Sclater Coll.
f. ♂ ad. sk.	Islay, Peru, Jan. 2 (*H. W.*).	Sclater Coll.
g. ♂ imm. sk.	Islay, Peru, May 15.	Henry Whitely [C.].
h. ♂ ad. sk.	Ropaybamba, Peru (*Jelski*).	Sclater Coll.
i, k. ♂ ad. sk.	Callao, Peru (*A. H. Markham*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Ecuador (*L. Fraser*).	Sclater Coll.
m. ♂ juv. sk.	Jima, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Intac, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Quito, Ecuador (*Bruce*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Pasto, Ecuador (*Lehmann*).	Salvin-Godman Coll.

Subsp. *β*. Chrysomitris boliviana.

Chrysomitris magellanica, *D'Orb. & Lafr. Syn. Av.* p. 83 (1837, *nec V.*); *Scl. & Salv. P. Z. S.* 1879, p. 607.
Chrysomitris barbata (*nec Mol.*), *Scl. Cat. Amer. B.* p. 83 (1862, pt.).

Adult male. Similar to *C. icterica*, but with the black of the crown reaching to the hind neck, and the black of the throat produced over the fore neck. Total length 4·2 inches, culmen 0·45, wing 3, tail 1·9, tarsus 0·55.

Adult female. Similar to the female of *C. icterica*, but larger and more yellow, not so ashy on the upper surface, more washed with yellow below, and with brighter yellow under tail-coverts. Total length 4·8 inches, culmen 0·4, wing 2·9, tail 1·8, tarsus 0·6.

Hab. Bolivia.

a. ♂ ad. sk.	Bolivia.	Sclater Coll.
b, c. ♂ ♀ ad. sk.	Bolivia.	Mr. Bridges [C.].

Subsp. *γ*. Chrysomitris longirostris.

Fringilla magellanica, *Vieill. Ois. Chant.* pl. xxx. (1805); *Gray, Gen. B.* ii. p. 371 (1849).
Chrysomitris icterica (*nec Licht.*), *Salv. Ibis*, 1885, p. 217.

Adult male. Similar to *C. icterica*, but rather brighter and with the back perfectly uniform, the bill longer and more pointed. Total length 4·1 inches, culmen 0·5, wing 2·4, tail 1·5, tarsus 0·45.

Adult female. Similar to the female of *C. icterica*, but decidedly brighter both above and below; the back yellowish green, and the under surface bright yellow. Total length 4 inches, culmen 0·4, wing 2·4, tail 1·35, tarsus 0·45.

One male, collected by Mr. Whitely in December, is golden yellow above and orange-yellow on the rump and under surface of the body. It is even brighter in plumage than *C. siemiradzkii*, and shows that *C. longirostris* is merely a connecting-link between *C. icterica* and *C. siemiradzkii*, which otherwise would have the appearance of a very distinct species.

Hab. Guiana.

a. ♀ ad. sk.	Roraima, Nov. 23, 1883 (*H. Whitely*).	Sclater Coll.
b. ♂ ad. sk.	Roraima, Jan. 29, 1884 (*H. W.*).	Sclater Coll.
c. ♂ ad. sk.	Roraima, Dec. 28, 1881 (*H. W.*).	Sclater Coll.
d, *e*. ♂ ♀ ad. sk.	Roraima, Nov. 1883 (*H. W.*).	Salvin-Godman Coll.
f, *g*. ♂ ♀ ad. sk.	Roraima, Jan. 6, 1882 (*H. W.*).	Salvin-Godman Coll.

Subsp. δ. **Chrysomitris siemiradzkii.**

Chrysomitris siemiradzkii, *Berlepsch & Tacz. P. Z. S.* 1883, p. 551, pl. 50, 1884, p. 313; *Tacz. Orn. Pérou*, iii. p. 50 (1886).

Adult male. Similar to *C. icterica*, but apparently always uniform olive-yellow, with the rump and under surface of the body brilliant golden yellow; hind neck also bright yellow, forming a tolerably distinct collar. Total length 3·6 inches, culmen 0·4, wing 2·2, tail 1·25, tarsus 0·5.

Hab. Ecuador.

a. [♂ ad.] sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.

17. **Chrysomitris notata.**

Carduelis notata, *Du Bus, Bull. Acad. Bely.* xiv. pt. 2, p. 106 (1847); *id. Rev. Zool.* 1848, p. 247.

Fringilla notata, *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 82, no. 7196 (1870).

Chrysomitris notata, *Bp. Consp.* i. p. 516 (1850); *Cab. Mus. Hein.* Th. i. p. 160 (1850); *Scl. P. Z. S.* 1856, p. 304, 1858, p. 303, 1859, pp. 365, 380; *Scl. & Salv. Ibis*, 1860, p. 275; *Scl. Cat. Amer. B.* p. 124 (1862); *id. P. Z. S.* 1864, p. 474; *Cass. Proc. Philad. Acad.* 1865, p. 92; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 550 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Lawr. Bull. U. S. Nat. Mus.* iv. p. 22 (1876); *Salv. Cat. Strickl. Coll.* p. 214 (1882); *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 428 (1886).

Adult male. General colour above olive-yellow, golden yellow on the rump; all the wing-coverts, as well as the bastard-wing and primary-coverts, black; quills black, with the basal third golden yellow; upper tail-coverts and tail-feathers black, all but the central rectrices bright yellow for the basal half; head all round, throat, and fore neck black; sides of neck, chest, and under surface of body golden yellow, paler on the abdomen; sides of body and flanks a little more olive-yellow; thighs and under tail-coverts yellow; under wing-coverts yellow with blackish bases; axillaries yellow; quills below black, yellow towards the base of the inner web. Total length 4·1 inches, culmen 0·45, wing 2·6, tail 1·5, tarsus 0·5.

The sexes in this species are said to be alike; but I greatly doubt the correctness of this determination. A female (so-called) in the Sclater Collection exactly resembles the male; but I see that the late M. Jules Verreaux has written on the label "est un ♂;" but whether he wrote from positive knowledge or from conjecture I cannot say. The colours are altogether less brilliant than in the

male described above. My impression is that the birds described as immature are really the adult females, and that the latter sex will be found to be altogether more dingy in coloration, to want the black head of the male, and to have yellowish-white edges to the wing-coverts and inner secondaries.

Hab. Central America, from Mexico to Guatemala.

a, b. ♂ ad. st.	Mexico.	Purchased.
c. ♂ ad. sk.	City of Mexico (*Elwes*).	Sclater Coll.
d. ♂ ad. sk.	City of Mexico (*White*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Orizaba (*Botteri*).	Sclater Coll.
f. ♂ ad. sk.	Volcan de Fuego, Guatemala, Aug. 16, 1859 (*O. S.*).	Salvin-Godman Coll.
g. Imm. sk.	Calderas, Volcan de Fuego, Oct. 31, 1873 (*O. S.*).	Salvin-Godman Coll.
h. Ad. sk.	Pine ridge of Dolores, Guatemala (*O. S.*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Santa Barbara, Vera Paz, Jan. 1862 (*O. S.*).	Salvin-Godman Coll.
k, l. ♂ ad. et imm. sk.	Vera Paz (*Hague*).	Salvin-Godman Coll.

18. Chrysomitris forreri.

Chrysomitris forreri, *Salvin & Godman, Biol. Centr.-Amer., Aves*, p. 429 (1886).

Adult male. Similar to *C. notata*, but altogether greener, the black spot not extending even on to the lower throat. Total length 4·2 inches, culmen 0·45, wing 2·55, tail 1·5, tarsus 0·5.

Adult female. Similar to the male. Total length 4·3 inches, culmen 0·45, wing 2·55, tail 1·45, tarsus 0·55.

Hab. Mexico.

a, b. ♂[♀] ad. sk.	Ciudad Durango, Mexico (*A. Forrer*).	Salvin-Godman Coll. (Types of species.)

19. Chrysomitris nigriceps.

Serinus nigriceps, *Rüpp. Neue Wirb.* p. 96, Taf. 34. fig. 2 (1835–40); *id. Syst. Uebers.* p. 77 (1845); *Blanf. Geol. & Zool. Abyss.* p. 415 (1870); *Finsch, Tr. Z. S.* vii. p. 326 (1870).
Fringilla (Dryospiza) nigriceps, *Heugl. Syst. Uebers.* p. 41 (1856).
Fringilla nigriceps, *Gray, Gen. B.* ii. p. 371 (1849); *Heugl. J. f. O.* 1868, p. 93; *Gray, Hand-l. B.* ii. p. 82, no. 7202 (1870).
Citrinella nigriceps, *Bp. Consp.* i. p. 520 (1850); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 646 (1870).
Crithagra nigriceps, *Blyth, J. A. S. Beng.* xxiv. p. 257 (1855).
Dryospiza nigriceps, *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 494 (1856).
Chrysomitris nigriceps, *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 172 (1884).

Adult male. General colour above dull olive-yellow, the feathers of the mantle brown, edged with olive-yellow; rump rather brighter

and uniform olive-yellow; lesser wing-coverts bright yellow; median and greater coverts black, tipped with pale yellow, forming a double wing-bar; bastard-wing, primary-coverts, and quills black, edged narrowly with ashy, slightly tinged with yellow, the feathers all narrowly fringed with whitish at the ends; upper tail-coverts pale yellow; tail-feathers black, narrowly edged with dull yellow, ashy whitish along the end of the inner web and at the tip of the feathers; crown of head, entire sides of face, and throat black with a slight tinge of olive; hind neck and sides of neck rather brighter olive-yellow; remainder of under surface of body, from the fore neck downwards, yellow, a little greener on the sides of body and flanks; thighs, vent, and under tail-coverts pale yellow; under wing-coverts and axillaries pale ashy brown, edged with yellow; quills below dusky, ashy along the inner edge: "bill and feet dusky blackish." Total length 5·5 inches, culmen 0·4, wing 3, tail 2·1, tarsus 0·65.

Adult female. Altogether duller in colour than the male, the upper surface being chocolate-brown, with darker centres to the feathers, the head brown like the back, the sides of the head and throat dusky brown washed with olive; rest of the under surface very pale yellow, the sides of the body browner, and the flanks streaked with blackish. Total length 5 inches, culmen 0·4, wing 3, tail 2·05, tarsus 0·7.

Hab. Highlands of Abyssinia, the Gala country, and Shoa.

a. ♂ ad. sk.	Abyssinia.	Purchased.
b. ♀ jun. sk.	Abyssinia.	Dr. Rüppell [C.].
c. ♂ ad. sk.	Angollala, Shoa, June 1842 (*Sir W. C. Harris*).	India Museum.
d. ♂ ad. sk.	Adigrat, Tigré, April 1, 1868.	W. T. Blanford, Esq. [C.].
e. ♀ ad. sk.	Duga Pass, S. of Antalo, Aug. 8, 1868.	W. T. Blanford, Esq. [C.].

20. Chrysomitris lawrencii.

Carduelis lawrencii, *Cass. Proc. Philad. Acad.* 1850, p. 105, pl. 5.

Chrysomitris lawrencii, *Bp. C. R.* xxxvii. p. 913 (1853); *Baird, B. N. Amer.* p. 424 (1858); *Scl. Cat. Amer. B.* p. 124 (1862); *Elliot, New & Unfig. Birds N. Amer.* pl. viii. (1869); *Cooper, B. Calif.* p. 171 (1870); *Coues, Key N. Amer. B.* p. 132 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 478 (1874); *Belding, Pr. U. S. Nat. Mus.* i. p. 414 (1879); *Cooper, op. cit.* ii. p. 247 (1880).

Fringilla lawreucii, *Gray, Hand-l. B.* ii. p. 81, no. 7179 (1870).

Astragalinus lawrencii, *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 177 (1880); *Coues, Key N. Amer. B.* 2nd ed. p. 355 (1884).

Spinus lawrencii, *Stejneger, Auk*, ii. p. 362 (1884); *A. O. U. Check-list N. Amer. B.* p. 262 (1886); *Everm. Auk*, iii. p. 182 (1886).

Adult male in winter plumage. General colour above ashy brown, the mantle and upper back with a certain amount of olive-yellow; lower back and rump golden yellow washed with olive; lesser and median coverts dull golden yellow, with concealed black bases; the

greater coverts brighter yellow, tipped with ashy, the black bases conspicuous and forming a bar; bastard-wing and primary-coverts black, fringed with olive-yellow; quills black, edged with bright golden yellow, becoming whitish towards the extremity of the yellow margin of the primaries; all the quills narrowly fringed with white at the ends, the inner secondaries broadly margined with whitish on both webs, and also black at the base, forming a bar as in the greater coverts; upper tail-coverts ashy grey; tail-feathers black, edged with ashy grey, fringed with white on the inner web, the three outer feathers with a large square white spot on the inner web, slightly indicated also on the fourth feather; crown of head black, the sides of the hinder crown, nape, and hind neck ashy; lores, fore part of cheeks, and eyelid black; ear-coverts and remainder of cheeks ashy grey, slightly tinged with yellow and pearly grey just behind the eye: throat black in the centre, the sides ashy like the ear-coverts and sides of neck; lower throat, fore neck, and breast golden yellow; abdomen and under tail-coverts white; sides of body and flanks ashy brown: thighs whitish, externally ashy; under wing-coverts and axillaries yellow, ashy at the base; quills below dusky, ashy along the inner edge. Total length 4·5 inches, culmen 0·3, wing 2·6, tail 1·8, tarsus 0·5.

The *adult male in summer plumage*, by the abrasion of the edges of the feathers, has the mantle and upper back yellow, but not so bright as the lower back and rump. The black on the throat narrows to a point.

Adult female. Similar to the male, but with the black of the head replaced by ash (*Baird, Brewer, and Ridgway*).

Young. Uniform ashy brown above, the neck like the back; lesser wing-coverts like the back; median and greater coverts dusky, edged with olive-yellow, broadly tipped with whity brown, forming a double wing-bar; bastard-wing and primary-coverts dusky blackish, fringed with yellowish; quills blackish, edged with olive-yellow, fringed with white at the ends, the secondaries broadly margined and having a black bar near the base; tail-feathers blackish, edged and tipped with ashy; sides of face, throat, and breast rather lighter ashy brown than the back, the fore neck and breast faintly streaked with dusky brown; abdomen whitish; under tail-coverts whitish with dusky bases.

Young female. Resembling the young male, but without any streaks on the breast.

Hab. California; Arizona in winter.

a. Ad. sk.	California.	Purchased.
b. Ad. sk.	California.	Sclater Coll.
c. ♂ ad. sk.	California (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Fort Tejon, California, May 5, 1858 (*J. Xantus*; Sm. no. 25659).	Salvin-Godman Coll.
e. ♂ ad. sk.	Fort Tejon, June 17, 1858 (*J. Xantus*; Sm. no. 25650).	Salvin-Godman Coll.

f. ♂ ad.; *g.* ♀ juv. sk.	Santa Barbara, California, June 25, 1875 (*H. W. Henshaw*; Sm. nos. 72106, 72127).	U. S. Nat. Museum [P.].
h. ♂ juv. sk.	Santa Barbara, July 2, 1875 (*H. W. Henshaw*; Sm. no. 72117).	U. S. Nat. Museum [P.].
i. ♂ ad. sk.	Cohuilla Valley, California, Dec. 4, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
k. ♂ ad. sk.	Fort Whipple, Arizona, Nov. 2, 1864 (*E. Coues*; Sm. no. 40831).	Salvin-Godman Coll.

21. Chrysomitris cucullata.

Carduelis cucullata, *Swains. Zool. Illustr.* i. pl. 7 (1820–21).
Fringilla cubæ, *Guérin, Mag. de Zool.* 1835, *Aves*, pl. 44; *Cab. J. f. O.* 1856, p. 10; *Gundl. J. f. O.* 1859, p. 295.
Fringilla cucullata, *Gray, Gen. B.* ii. p. 371 (1841); *id. Hand-l. B.* ii. p. 82, no. 7199 (1870).
Pyrrhomitris cucullata, *Bp. Consp.* i. p. 517; *Gundl. Orn. Cuba*, p. 21 (1876); *id. J. f. O.* 1878, p. 160; *Cory, Auk*, iii. p. 207 (1885).
Chrysomitris cucullata, *Sclater, Cat. Amer. B.* p. 123 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 34 (1873).

Adult male. General colour above dark vermilion, the lower back, rump, and upper tail-coverts brighter vermilion than the mantle; wing-coverts dark vermilion, with black bases; greater coverts black, tipped with vermilion; bastard-wing and primary-coverts black; quills black, vermilion at the base, with black shafts, the inner secondaries entirely black, edged with dull white or pale red at the ends of the outer webs; tail-feathers black, pale vermilion at the base; crown of head, sides of face, ear-coverts, cheeks, and throat black; sides of neck and under surface of body vermilion, the thighs and abdomen white; under tail-coverts vermilion, whitish at the ends; under wing-coverts and axillaries vermilion, with ashy bases; quills below black, pale vermilion towards the base. Total length 4 inches, culmen 0·4, wing 2·4, tail 1·4, tarsus 0·5.

Adult female. Dark ashy grey above, with a slight tinge of vermilion on the back; lower back, rump, and upper tail-coverts vermilion; wings as in the male, but more orange-scarlet than vermilion on the red parts; lores whitish; sides of face and throat pearly grey, whiter on the chin; fore neck and breast orange-scarlet; lower breast and abdomen white, as also the thighs and under tail-coverts; sides of body and flanks ashy grey with a brownish tinge; under wing-coverts and axillaries ashy whitish, with a slight tinge of red on the lower ones; quills dusky below, ashy whitish on the inner web, tinged with vermilion towards the base. Total length 3·7 inches, culmen 0·4, wing 2·45, tail 1·35, tarsus 0·5.

Young males are browner than the adults, all the colours of the full plumage being overshaded with brown, with which the feathers are tipped; wing-coverts black, tipped with yellowish white; quills as in the adult male, but yellow at the base instead of red; under

surface of body ochreous buff, with the black of the throat and the red of the breast distinguishable underneath.

Hab. Venezuela and Trinidad. Introduced into Cuba and Porto Rico.

a. ♂ ad. sk.	Venezuela.	Salvin-Godman Coll.
b. ♂ ad. sk.	Carupano, Venezuela, Feb. 1867 (*A. Goering*).	Salvin-Godman Coll.
c. ♂ jun. sk.	Venezuela.	Sclater Coll.
d. ♂ ad. sk.	Caracas, Venezuela.	Mr. C. Dyson [C.].
e. ♂ ad. sk.	Trinidad.	Sclater Coll.
f. ♀ ad. sk.	Trinidad.	Purchased.
g. ♂ ad. st.	Cuba.	Purchased.

22. Chrysomitris thibetana. (Plate III.)

Chrysomitris thibetana, *Hume, Ibis*, 1872, p. 107; *Brooks, Ibis*, 1872, p. 469; *Hume, Str. F.* 1877, p. 416; *id. Str. F.* 1879, p. 108.

Adult male. General colour above dark olive-green, the head like the back, the feathers of the nape and hind neck subterminally marked with yellow, forming a patch; lower back and rump dark greenish yellow washed with olive-green; wing-coverts dark greenish yellow; the median and greater coverts with blackish bases, the latter fringed at the tip with pale yellow; bastard-wing blackish; primary-coverts and quills blackish, edged with greenish yellow, brighter on the primaries, the secondaries fringed with whitish at the tips; upper tail-coverts dark greenish yellow with dusky centres; tail-feathers black, edged with yellow externally and with white at the tip and along the inner web; lores, feathers round eye, and a streak above the ear-coverts yellow, as well as the sides of the face generally; ear-coverts dusky, washed with greenish yellow; cheeks yellow, with a dusky stripe on the hinder parts; throat and under surface of body yellow; the abdomen white; sides of body and flanks washed with greenish yellow; thighs dark ashy; under tail-coverts bright yellow; under wing-coverts dull greenish yellow; axillaries paler yellow; quills below dusky, ashy along the inner edge. Total length 4·1 inches, culmen 0·4, wing 2·75, tail 1·6, tarsus 0·5.

Some of the males have slight indications of dusky streaks on the back, and have the flanks very plainly streaked. In these birds the yellow colour is a little duller than in the one described. They are probably males of the previous year.

Adult female (type of species). Different from the male. General colour above dull greenish, mottled with yellow edges to the feathers, which have also dusky centres; the head like the back, but less distinctly streaked; rump greenish yellow, streaked with dusky centres; lesser wing-coverts greenish yellow; median and greater coverts dusky blackish, broadly tipped with greenish yellow, forming a double wing-bar; bastard-wing, primary-coverts, and quills blackish, fringed with greenish yellow, broader towards the end of the secondaries; tail-feathers as in the male; lores and facial markings as in the male, but more dingy, and the yellow not so bright; throat

and fore neck yellow, the rest of the under surface whiter, tinged with yellow; sides of the breast, sides of body, and flanks broadly streaked with black; thighs ashy; under tail-coverts yellow, white at tip and streaked with black; under wing-coverts and axillaries white, washed with yellow; quills below dusky, whitish along the the inner edge. Total length 4·5 inches, culmen 0·35, wing 2·7, tail 1·6, tarsus 0·5.

Hab. Interior of Sikhim, Himalaya Mountains.

a. ♀ ad. sk.	Sikhim, on the borders of Thibet, 1878 (*L. Mandelli*).	Hume Coll. (Type of species.)
b–g. ♂ ad.; *h.* ♀ ad. sk.	Interior of Sikhim, Feb. 1873 (*L. Mandelli*).	Hume Coll.
i, k. ♂ ad.; *l, m.* Imm. sk.	Sikhim, 1872 (*L. Mandelli*).	Hume Coll.

23. Chrysomitris pinus.

Fringilla pinus, *Wils. Amer. Orn.* ii. p. 133, pl. 17. fig. 1 (1810); *Nutt. Man.* p. 511 (1832); *Audub. B. Amer.* pl. 180; *id. Orn. Biogr.* ii. p. 455 (1834), v. p. 509 (1839); *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 81, no. 7182 (1870).

Carduelis pinus, *Jard. ed. Wils. Amer. Orn.* i. p. 275, pl. xvii. fig. 1 (1832).

Chrysomitris pinus, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* p. 515 (1850); *Baird, B. N. Amer.* p. 425 (1858); *Scl. Cat. Amer. B.* p. 124 (1862); *Blakist. Ibis*, 1862, p. 6, 1863, p. 71; *Scl. P. Z. S.* 1864, p. 174; *Baird, Ibis*, 1867, p. 268; *Brown, Ibis*, 1868, p. 421; *Scl. & Salv. P. Z. S.* 1869, p. 302; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 350 (1869); *Cooper, B. Calif.* p. 172 (1870); *Allen, Bull. Mus. C. Zool. Cambr.* iii. p. 176 (1872); *Coues, Key N. Amer. B.* p. 131 (1872); *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 60 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Coues, B. N.-West*, p. 115 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 480, pl. 22. fig. 16 (1874); *Hensh. Rep. Expl. 100th Merid.* p. 246 (1875); *Belding, Pr. U. S. Nat. Mus.* i. p. 414 (1879); *Ridgw. op. cit.* iii. p. 177 (1880); *Salv. Cat. Strickl. Coll.* p. 213 (1882); *id. & Godman, Biol. Centr.-Amer., Aves*, i. p. 429 (1886); *Coues, Key N. Amer. B.* 2nd ed. p. 254 (1884); *Scott, Auk*, i. p. 160 (1884); *Bicknell, t. c.* p. 328; *Beckham, Auk*, ii. p. 141 (1885).

Linaria pinus, *Audub. B. Amer.* iii. p. 125, pl. 180 (1841).

Chrysomitris macroptera, *Du Bus, Esq. Orn.* pl. 23 (ined.); *Bp. Consp.* i. p. 515 (1850).

Spinus pinus, *Stejneger, Auk*, i. p. 362 (1884); *Turner, Proc. U. S. Nat. Mus.* viii. p. 240; *A. O. U. Check-list N. Amer. B.* p. 262 (1886); *Anthony, Auk*, iii. p. 168 (1886); *Seton, t. c.* p. 323 (1886).

Adult male in breeding-plumage. General colour above brown, more ashy on the rump, which is tinged with pale yellow, the entire upper surface broadly streaked with blackish centres to the feathers, those on the rump being rather broadly margined with yellowish white; lesser wing-coverts brown; median and greater coverts blackish brown, tipped with white, which has a yellowish tinge on

the latter series; bastard-wing and primary-coverts blackish brown; quills blackish brown, the primaries edged with yellow, more broadly at the base, the secondaries yellow at the base, and again margined with pale yellow or yellowish white near the end of the feather; upper tail-coverts dusky brown, with blackish centres and ashy margins; centre tail-feathers blackish brown, yellowish at base, the remainder with the basal two thirds of the inner web yellow, increasing towards the outer feather; crown of head like the back, and similarly streaked; lores and feathers over the eye hoary whitish, with minute dusky streaks; feathers below the eye whitish; ear-coverts uniform brown; sides of neck hoary whitish, streaked with black; cheeks and under surface of body dull white, tinged with brown on the fore neck, and broadly streaked with blackish brown; lower abdomen white; thighs white; under tail-coverts white, with blackish centres to the feathers; under wing-coverts and axillaries white, washed with yellow; quills below dusky, edged with ashy yellowish, and brighter yellow towards the base; "bill light yellowish brown, dusky at the tip; feet purplish brown; iris brown" (*Audubon*). Total length 4·5 inches, culmen 0·45, wing 3, tail 1·75, tarsus 0·55.

Adult female. Similar to the male, but not so strongly streaked below, and with the yellow on the inner web of the tail-feathers less extended. Total length 4·4 inches, culmen 0·45, wing 2·4, tail 1·8, tarsus 0·55.

The *winter plumage of the adults* only appears to vary slightly from the summer plumage, being a little browner. *Young birds* are paler and much more lightly streaked, and have a decided yellow tinge on the underparts.

Hab. North America generally, wintering in Mexico.

a. Juv. sk.	49th parallel, Aug. 13, 1874 (*G. Dawson*).	U.S. Boundary Commission.
b, c. ♂ ♀ ad. sk.	Vancouver Island, May (*A. Forrer*).	Salvin-Godman Coll.
d, e. ♂; *f, g.* ♀ imm. sk.	British Columbia.	J. K. Lord, Esq. [P.].
h. ♀ imm. sk.	British Columbia (*J. K. Lord*).	U.S. Boundary Commission [P.].
i. ♂ ad. sk.	Shelter Island, New York, Oct. 23, 1882 (*W. W. Worthington*).	R. B. Sharpe, Esq. [P.].
k. Ad. sk.	Nebraska, Sept. 15, 1856 (*F. V. Hayden*; Sm. no. 5394).	Salvin-Godman Coll.
l. ♀ ad. sk.	Mount Graham, Arizona, Sept. 21, 1874 (*H. W. Henshaw*; Sm. no. 72124).	U. S. Nat. Museum.
m. Juv. sk.	Camp Grant, Arizona, July 30, 1874 (*H. W. Henshaw*; Sm. no. 68809).	U. S. Nat. Museum.
n. ♀ ad. sk.	California.	Purchased.
o. Ad. sk.	California.	Lord Walsingham [P.].
p. Ad. sk.	Mexico (*White*).	Sclater Coll.
q, r. Ad. sk.	Jalapa, S. Mexico (*de Oca*).	Salvin-Godman Coll.

24. Chrysomitris citrinelloides.

Serinus citrinelloides, *Rüpp. Neue Wirb., Vög.* p. 95, Taf. 34. fig. 1 (1835–40); *id. Syst. Uebers.* p. 77 (1845); *Blanf. Geol. & Zool. Abyss.* p. 414 (1870); *Finsch, Tr. Z. S.* vii. p. 326 (1870).
Fringilla citrinelloides, *Des Murs in Lefebvre's Voy. Abyss.* p. 174 (1845); *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 82, no. 7204 (1870).
Fringilla (Dryospiza) citrinelloides, *Heugl. Syst. Uebers.* p. 41 (1856).
Citrinella citrinelloides, *Bp. Consp.* i. p. 520 (1850); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 644 (1870); *Shelley, P. Z. S.* 1885, p. 228.
Chrysomitris citrinelloides, *Salv. Cat. Strickl. Coll.* p. 213 (1882).

Adult male. General colour above yellowish green, all the feathers mesially streaked with black, rather less distinct on the rump; lesser wing-coverts like the back, with black centres; median and greater coverts black, edged with ashy and yellow towards the ends; bastard-wing, primary-coverts, and quills black, edged with yellow, the inner secondaries more broadly, the outer ones and the primaries narrowly fringed with yellowish white at the ends; upper tail-coverts yellowish green with dusky centres; tail-feathers blackish, edged with yellow; crown of head like the back and streaked in the same manner; lores and sides of face and ear-coverts dusky green, as well as the cheeks and chin; sides of neck and of the hinder crown brighter yellow; throat bright yellow, narrowly streaked with black; fore neck and breast yellowish green, the sides streaked with black; abdomen bright yellow; sides of body and flanks yellow, streaked with black, more broadly on the latter; thighs and under tail-coverts yellow; under wing-coverts and axillaries ashy, edged with yellow; quills below dusky, ashy along the inner edge: "bill dusky horn-colour, the lower mandible flesh-colour; feet dusky; iris dusky brown" (*Heuglin*). Total length 4·5 inches, culmen 0·45, wing 2·65, tail 1·75, tarsus 0·6.

Hab. Highlands of Abyssinia and Kilima-Njaro in Eastern Africa.

a. ♂ ad. sk.	Senafe, Tigré, May 29, 1868.	W. T. Blanford, Esq. [C.].
b, c. Ad. sk.	Kilima-Njaro, 6000 feet.	H. H. Johnston, Esq. [C.].

25. Chrysomitris melanops.

Fringilla melanops, *Heugl. J. f. O.* 1868, p. 92; *Gray, Hand-l. B.* ii. p. 82, no. 7205 (1870).
Citrinella melanops, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 645 (1870); *Fischer in Madarász, Zeitschr. ges. Orn.* i. p. 321 (1884).
Chrysomitris melanops, *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 174 (1884).

Adult. Bright yellowish green, underneath deep yellow; the sides of the breast and flanks washed with yellowish green, the latter in part delicately streaked with blackish; face with a circumscribed mask of black (a defined frontal margin, lores, region of the eye, cheeks, and chin); a superciliary streak of pure yellow; feathers of the head and back and the upper tail-coverts streaked with blackish; tail and wings blackish, conspicuously margined with

greenish yellow; a broad margin to the wing-coverts, bright greenish yellow; upper mandible dusky, the lower mandible fleshy white; feet and iris dusky. Total length 4″ 7‴, bill from front $4\frac{3}{4}$‴, wing 2″ $6\frac{1}{2}$‴, tail 1″ 10‴, tarsus 6‴–7‴. (*Heuglin.*)

Hab. Abyssinia to Shoa and Masai-Land in Eastern Africa.

26. Chrysomitris citrinella.

Le Serin d'Italie, *Briss. Orn.* iii. p. 182 (1760).

Fringilla citrinella, *Linn. Syst. Nat.* i. p. 320 (1766); *Temm. Man. d'Orn.* i. p. 370 (1820); *Roux, Orn. Prov.* pl. 90 (1825); *Naum. Vög. Deutschl.* v. pl. 124. figs. 3, 4 (1826); *Werner, Atlas, Granivores*, pl. 49 (1827); *Keys. u. Blas. Wirb. Eur.* p. 162 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 187, note (1840); *Linderm. Vög. Griechenl.* p. 61 (1860); *Powys, Ibis*, 1860, p. 138; *Blasius, Ibis*, 1862, p. 71; *Borggr. Vogelf. Deutschl.* p. 76 (1869); *Elwes & Buckley, Ibis*, 1870, p. 193; *Fritsch, Vög. Eur.* tab. 17. fig. 8; *Gray, Hand-l. B.* ii. p. 82, no. 7201 (1870).

Emberiza brumalis, *Scop. Ann.* i. p. 145 (1769)*.

Le Venturon de Provence, *Daubent. Pl. Enl.* iv. pl. 658. fig. 2.

Citril Finch, *Lath. Gen. Syn.* ii. pt. 1, p. 908 (1783).

Spinus citrinella, *Koch, Syst. baier. Zool.* p. 234 (1816); *Brehm, Vög. Deutschl.* p. 286 (1831).

Serinus citrinella, *Boie, Isis*, 1822, p. 555.

Chrysomitris citrinella, *Boie, Isis*, 1828, p. 322; *Saunders, Ibis*, 1871, p. 219; *Wharton, Ibis*, 1876, p. 25; *Dresser, B. Eur.* iii. p. 535, pls. 167, 168 (1877); *Salvin, Cat. Strickl. Coll.* p. 213 (1882); *Whitehead, Ibis*, 1885, p. 39.

Carduelis citrinella, *Gould, B. Eur.* iii. pl. 198 (1837).

Citrinella serinus, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838).

Citrinella alpina, *Bp. Cat. Metod. Ucc. Eur.* p. 48 (1842); *id. Consp.* i. p. 520 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 145 (1859); *Degl. et Gerbe, Orn. Eur.* p. 283 (1887); *Loche, Expl. Sci. Algér., Ois.* i. p. 155 (1867); *Doderl. Arif. Sicil.* p. 82 (1869).

Cannabina citrinella, *Degl. Orn. Eur.* i. p. 232 (1849).

Chloroptila citrinella, *Salvad. Atti R. Accad. Torino*, vii. p. 260 (1871); *id. Faun. Ital., Ucc.* p. 260 (1871); *Giyl. Ibis*, 1881, p. 203; *id. Avif. Ital.* p. 29 (1886).

Adult male. General colour above dull olive-green, with dusky shaft-streaks; the rump and upper tail-coverts brighter yellow; lesser and median coverts uniform olive-yellow, with dusky bases; greater coverts blackish brown, tipped with olive-yellow, forming a wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy yellow, whitish on the margin of the primaries; tail-feathers dusky brown, edged with dull yellow and narrowly fringed with white along the inner web; crown of head olive-yellow, brighter on the forehead and over the eye; the occiput, nape, and hind neck, as well as the sides of the neck, dark ashy grey; lores dull ashy; feathers round eye and fore part of cheeks olive-yellow;

* By some authors a reference is given to Scopoli's book (p. 205) for "*Fringilla alpina*," but no such page or name apparently exists in the copy consulted by me.

ear-coverts and remainder of cheeks dark ashy grey; throat, fore neck, and chest olive-yellow, becoming brighter yellow on the breast and abdomen, the lower abdomen whitish; sides of body and flanks ashy grey; thighs pale ashy; under tail-coverts yellow or white washed with yellow; under wing-coverts and axillaries ashy whitish washed with yellow; quills below dusky brown, ashy whitish along the inner edge: "bill brown; iris yellowish brown" (*Loche*). Total length 4·8 inches, culmen 0·3, wing 3, tail 2·1, tarsus 0·55. (*Mus. H. Seebohm.*)

Adult female. Much duller than the male and browner above, the yellow colour of the forehead and underparts also duller. Total length 4·5 inches, culmen 0·35, wing 3·05, tail 2, tarsus 0·55.

Young male in first winter. Similar to the adult female but browner; the head ashy brown, with black central streaks like the back.

Hab. Central and Southern Europe.

a. Ad. sk.	Europe.	J. Gould, Esq.
b, c. ♂ ♀ ad. sk.	Nice, Nov. 1886.	Prof. Giglioli [P.].

27. Chrysomitris totta.

Loxia totta, *Sparrm. Mus. Carls.* i. pl. 18 (1786).
Citrinella totta, *Bp. Consp.* i. p. 520 (1850); *Sharpe, Cat. Afr. B.* p. 66 (1871).
Fringilla totta, *Layard, B. S. Afr.* p. 202 (1867); *Grill, Zool. Anteckn.* p. 24 (1858); *Gray, Hand-l. B.* ii. p. 82, no. 7203 (1870).
Chrysomitris totta, *Salvin, Cat. Strickl. Coll.* p. 214 (1882).
Serinus totta, *Sharpe, ed. Layard's B. S. Afr.* p. 488 (1884).

Adult male. General colour above chocolate-brown, faintly mottled with darker centres to the feathers of the mantle; rump dull olive-yellow; wing-coverts uniform chocolate-brown, with a slight yellowish tip to the median and greater coverts, bastard-wing and primary-coverts chocolate-brown; quills brown, externally black and having a subterminal mark of black before the tip, which is white; upper tail-coverts brown, darker in the centre and edged with whitish; tail-feathers black, tipped with a white spot, increasing in size towards the outer feather; crown of head dull olive-yellow, with dusky centres to the feathers; lores ashy, surmounted by a narrow line of olive-yellow, forming an indistinct eyebrow; ear-coverts and sides of face dull ashy, washed with olive-yellow; cheeks rather brighter olive-yellow, streaked with dusky brown; throat and under surface of body olive-yellow, clearer and brighter yellow on the throat and abdomen, the throat with a few blackish spots; sides of body and flanks browner; thighs ashy brown; under tail-coverts ashy brown, with whitish edges; under wing-coverts and axillaries light ashy, washed with pale yellow; quills below dusky brown; ashy along the inner edge. Total length 5 inches, culmen 0·4, wing 2·8, tail 1·9, tarsus 0·6.

The female appears to differ only in being browner, without any yellow on the head, which is brown like the back and streaked with

blackish; the throat and fore neck are ashy brown, washed with yellow and thickly spotted with blackish brown.

The older males seem to have the throat entirely yellow without spots.

Hab. South Africa.

a. Ad. st.	Cape Colony.	Dr. Krauss [C.].
b. Ad. st.	Cape Colony.	Sir A. Smith [C.].
c. [♂ ad.] sk.	Cape Colony.	Purchased.
d. [♂ ad.] sk.	Cape Colony.	Sir A. Smith [C.].
e. [♀ ad.] sk.	Cape Colony.	J. Gould, Esq.
f. [♀ ad.] sk.	Cape Colony (*E. L. Layard*).	Sharpe Coll.
g. ♂ ad. sk.	Cape Town, April 14, 1866 (*C. J. Andersson*).	Sharpe Coll.
h. [♀ juv.] sk.	George, Knysna (*H. Atmore*).	Sharpe Coll.

28. CALLACANTHIS.

	Type.
Callacanthis, *Reichenb. Syst. Av.* tab. lxxviii. fig. 12 (1850)	? C. burtoni.
Burtonia, *Bp. MSS., teste Bp. Consp.* i. p. 507 (1850) ..	C. burtoni.

Range. Himalaya Mountains.

1. Callacanthis burtoni.

Carduelis burtoni, *Gould, P. Z. S.* 1837, p. 90.
Fringilla erythrophrys, *Blyth, J. A. S. Beng.* xv. p. 38 (1846).
Fringilla burtoni, *Gray, Gen. B.* ii. p. 371 (1849); *Blyth, Cat. B. Mus. As. Soc.* p. 337 (1849); *Gould, B. Asia,* v. pl. 16 (1850); *Tytler, Ibis,* 1868, p. 201; *Gray, Hand-l. B.* ii. p. 80, no. 7174 (1870).
Callacanthis burtoni, *Bp. Consp.* i. p. 507 (1850); *Blyth, Ibis,* 1867, pp. 45, 184; *Pelz. Ibis,* 1868, p. 318; *Brooks, Str. F.* 1876, p. 255; *Hume, Str. F.* 1879, p. 108; *Salvin, Cat. Strickl. Coll.* p. 208 (1882).
Burtonia erythrophrys, *Bp. MS., teste Bp. l. c.*

Adult male. General colour above brown, with a wash of rose-colour, the rump paler and more cinnamon with a rosy wash; scapulars like the back; lesser and median coverts black, with a small tip of rose-colour; greater coverts black, with a large white spot at the end tinged with rose; bastard-wing and primary-coverts black, tipped with white, the latter very broadly and forming a speculum; quills black, the primaries with a white longitudinal mark at the end of the outer web, the secondaries tipped with a white spot, the innermost having this white spot tinged with rose like the greater coverts; upper tail-coverts cinnamon-brown; tail-feathers black, tipped with a white spot, increasing in extent towards the outer ones, the two outermost having a large wedge-shaped mark of white; crown of head and nape black, the forehead, lores, and eyebrow, as well as the feathers round the eye, pale crimson; ear-coverts and cheeks black, with whitish shaft-lines; under surface of body

pale cinnamon-brown; the throat, fore neck, and breast brighter rose-colour; the chin dusky blackish; abdomen ochreous buff; sides of body and flanks cinnamon-brown, washed with rosy; thighs ashy brown; under tail-coverts pale cinnamon-brown, with dusky bases; under wing-coverts and axillaries white, with ashy bases, the edge of the wing dusky; quills below dusky, ashy along the inner edge. Total length 6·5 inches, culmen 0·55, wing 3·9, tail 2·5, tarsus 0·75.

Adult female. Differs from the male in being much paler and more ochreous-brown; lesser wing-coverts like the back; median coverts dusky blackish, washed with ochreous-brown, with pale ochreous spots at the tips; greater coverts, bastard-wing, primary-coverts, and quills blackish, externally washed with ochre and all tipped with white; tail as in the male, but the white on the outer feathers not so extended; head dusky brown; frontal band, eye-brow, and feathers round the eye saffron-yellow; ear-coverts dusky brown, washed with ochreous-buff, with pale ochreous shaft-lines; cheeks and under surface of body pale ashy brown, washed with ochreous, the throat and fore neck washed with yellow; axillaries and under wing-coverts ochreous-buff, with ashy bases. Total length 6·5 inches, culmen 0·65, wing 3·9, tail 2·3, tarsus 0·85.

Hab. North-western Himalayas from Cashmere to the neighbourhood of Naini Tal.

a, b. ♂ ad. sk.	Cashmere.	Purchased.
c. ♂ ad. sk.	Gulmurg, Cashmere, Aug. 1874.	Hume Coll.
d. ♂ ad. sk.	Gulmurg, June 1871 (*W. E. Brooks*).	Hume Coll.
e. ♂ ad. sk.	Sonarmurg, July 16, 1874.	Hume Coll.
f. ♂ ad. sk.	Murri, 1868 (*C. H. T. Marshall*).	Hume Coll.
g. ♂ ad. sk.	Chamba, Jan. 20, 1880 (*C. H. T. Marshall*).	Hume Coll.
h. ♂ ad. sk.	Kotegurh, near Simla.	Hume Coll.
i, k. ♂ ♀ ad. sk.	Bussahir, N.W. Himalayas, Dec. 6, 1869.	Hume Coll.
l. ♂ ad. sk.	Fagoo, near Simla.	Hume Coll.
m, n. ♂ ♀ ad. sk.	Between Simla, and Mussoori.	Capt. Stackhouse Pinwill [P.].
o, p, q. ♂; *r, s.* ♀ ad. sk.	Naini Tal, Oct. 1869 (*R. Thompson*).	Hume Coll.
t. [♀ ad.] st.	Himalaya Mountains.	Purchased.

29. LOXIMITRIS *.

Type.

Loximitris, *Bryant, Proc. Bost. Soc. N. H.* xi. p. 93 (1866)..... L. dominicensis.

Range. San Domingo.

* No specimen of this genus has been at my disposal, so I have been obliged to copy the information given by Mr. Cory.

1. Loximitris dominicensis.

Chrysomitris (Loximitris) dominicensis, *Bryant, Proc. Bost. Soc. N. H.* xi. p. 93 (1866).
Fringilla dominicensis, *Gray, Hand-l. B.* ii. p 81, no. 7185 (1870).
Chrysomitris dominicensis, *Cory, Bull. Nutt. Orn. Club,* vi. p. 152 (1881).
Loximitris dominicensis, *Cory, Birds of Haiti and S. Domingo,* p. 67 (1885); *id. List Birds West Ind.* p. 12 (1885); *id. Auk,* iii. p. 207 (1886).

Male. Bill light brown colour, with the top dusky; whole head and throat black; back and scapulars olive; centre of each feather dusky; upper tail-coverts bright olive-yellow; wings with the quills and coverts blackish brown; the smaller coverts with so much of the tips olive as to appear almost wholly of this colour; the greater coverts and all the quill-feathers, except the first, bordered externally with the same colour, very narrowly on the primaries and suddenly wider on the secondaries, but only on the posterior half, so that the closed wing presents a distinct blackish bar running nearly across its centre; tail with the centre feather, outer web of first, and tips of all blackish brown, the rest bright chrome-yellow; beneath yellow, washed with olive on the flanks, and brightest on the crissum. (*Bryant.*)

Immature birds are dull olive, mottled with brownish on the back, and the underparts yellowish white, streaked with pale brown. (*Cory.*)

Length 4·10 inches, wing 2·60, tail 1·55, tarsus 0·53, bill 0·38.

Hab. San Domingo.

30. ACANTHIDOPS.

Type.
Acanthidops, *Ridgw. Pr. U. S. Nat. Mus.* iv. p. 335 (1882) . A. bairdi.

Dr. Sclater, who has examined the type specimens, says ('Ibis,' 1884, p. 241) that he would "propose to place *Acanthidops* near *Chrysomitris* in the family *Fringillidæ*." *

Range. Costa Rica.

1. Acanthidops bairdi.

Acanthidops bairdi, *Ridgw. Proc. U. S. Nat. Mus.* iv. p. 335 (1882); *Sclater, Ibis,* 1884, p. 241; *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 433 (1886).

Adult. Above dull olive-brown, the back washed with rusty; wings dusky, the middle and greater coverts tipped with pale rusty, forming two distinct bands; the inner secondaries broadly edged with darker rusty; remaining secondaries narrowly streaked with dark umber-brown, the primaries with light, dull ochraceous, or yellowish olive. Tail dusky, the outer webs slightly greenish

* I have accordingly followed Dr. Sclater in his opinion as to the position of the genus.

olivaceous. Pileum indistinctly streaked with dusky; sides of the head and neck dull olivaceous, lighter than the crown and nape; chin and throat still paler, the feathers pale ashy beneath the surface; rest of lower parts dull, light olivaceous, tinged with deeper olive across the breast and along the sides. Maxilla blackish, paler along the edge; mandible whitish; legs and feet light brownish (in dried skin); "iris pale blue." Wing 2·50 inches, tail 2·20, culmen 0·58, commissure 0·65, tarsus 0·80, middle toe 0·60.

Hab. Volcan de Irazu, Costa Rica.

31. ACANTHIS *.

	Type.
Acanthis, *Bechst. Orn. Taschenb.* p. 125 (1803)	A. linaria.
Linaria, *Vieill. Analyse*, p. 30 (1816, *nec Bechst., nec Botan.*)	A. rufescens.
Cannabina, *Brehm, Isis*, 1828, p. 1277	A. cannabina.
Linota, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838)	A. cannabina.
Ægiothus, *Cab. Mus. Hein.* Th. i. p. 161 (1850)	A. linaria.
Linacanthis, *Des Murs, Encl. Hist. Nat.* part 5, p. 304 (1854)	A. rufescens.
Acanthys, *Des Murs, Traité d'Ool.* p. 334 (1862).	
Agriospiza, *Sundev. Av. Meth. Tent.* p. 32 (1872) †....	A. flavirostris.

Cf. *Stejneger, Auk*, i. p. 145 (1884).

Range. The greater part of the Palæarctic and Nearctic Regions.

Key to the Species.

a. Without any red on the forehead or breast.

a'. Rump rosy.

a''. Throat and breast tawny buff, the latter slightly streaked with brown centres to the feathers; bill dusky .. *flavirostris* ♂, p. 236.

b''. Throat creamy buff; fore neck and breast ashy white, with broad black centres to the feathers; bill yellow.. *brevirostris* ♂, p. 239.

b'. No red on the rump.

c''. Sides of face dark ashy like the head; bill dusky ..... *cannabina* ♀, p. 242. *fringillirostris* ♀, p. 244.

d''. Sides of face clear tawny buff like the throat; bill yellow ..... *flavirostris* ♀, p. 237. *brevirostris* ♀, p. 239.

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* ACANTHIS BREWSTERI.

Ægiothus flavirostris, var. brewsterii, *Ridgw. Amer. Nat.* 1872, p. 433; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 501 (1874).
Ægiothus brewsteri, *Brewst. Bull. Nutt. Orn. Club*, vi. p. 225 (1881).
Acanthis brewsterii, *Ridgw. Proc. U. S. Nat. Mus.* p. 354 (1885); *A. O. U. Check-list N. Amer. B.* p. 354 (1886).

"The type specimen, taken at Waltham, Mass., remains unique. It cannot be identified with any known species, but may be a hybrid between *Acanthis linaria* and *Spinus pinus*." (A. O. U. Check-list, *l. c.*)

† Professor Sundevall here alludes to his genus *Agriospiza* as if it had been published before; if so, the description has escaped my efforts to discover it.

b. Forehead crimson.
c'. Wing-coverts uniform chestnut-brown like the back, with no white edgings; throat whitish.
e''. Primary-coverts edged with brown in contrast to the white margins of the primaries ..... *cannabina* ♂, p. 241.
f''. Primary-coverts edged with white like the primaries ..... } *fringillirostris* ♂, p. 244.
d'. Wing-coverts tipped with white or buffy white, forming wing-bars; chin blackish.
g''. Lower back and rump streaked with brown like back ..... } *linaria* and allies, pp. 245–252.
h''. Lower back and rump pure white .... } *exilipes* and allies, pp. 254–256.

1. Acanthis flavirostris.

La Linotte de Montagne, *Briss. Orn.* iii. p. 145 (1760); *Montb. Hist. Nat. Ois.* iv. p. 74 (1778).
Le Pinçon brun, *Briss. t. c.* p. 154 (1760); *Montb. t. c.* p. 121 (1778).
Fringilla flavirostris, *Linn. Syst. Nat.* i. p. 322 (1766); *Gm. Syst. Nat.* i. p. 914 (1788); *Keys. u. Blas. Wirb. Eur.* p. 162 (1840); *Nordm. in Démidoff, Voy. Russ. Mérid.* iii. p. 185 (1840); *Schl. Rev. Crit.* p. lxii (1844); *Gray, Gen. B.* ii. p. 372 (1849); *Sundev. Svensk. Fogl.* pl. iii. fig. 3 (c. 1856); *Gray, List Brit. B.* p. 99 (1863); *More, Ibis*, 1865, p. 130; *Borggr. Vogelf. Norddeutschl.* p. 76 (1869); *Seebohm, Hist. Brit. B.* ii. p. 111 (1884).
Mountain Linnet, *Penn. Brit. Zool.* p. 111 (1766); *Lath. Gen. Syn.* ii. pt. 1, p. 307 (1783).
Fringilla montium, *Gm. Syst. Nat.* i. p. 917 (1788); *Temm. Man. d'Orn.* i. p. 368 (1820); *Roux, Orn. Prov.* pl. 93 (1825); *Naum. Vög. Deutschl.* x. pl. 122 (1826); *Werner, Atlas, Granivores*, pl. 48 (1827); *Selys-Longch. Faun. Belge*, p. 73 (1842); *Kjærb. Danm. Fugle*, pl. 27. fig. 3 (1852); *Schl. Vog. Nederl.* pl. 170 (1854); *Hewits. Eggs Brit. B.* p. 203, pl. 51. fig. 3 (1856); *F. & P. Godman, Ibis*, 1861, p. 84; *Schl. Dier. Nederl. Vogels*, pl. 16. fig. 19 (1861); *Fritsch, Vög. Eur.* Taf. 26. fig. 9 (c. 1870); *Keulem. Onze Vog.* ii. pl. 44 (1873); *Fallon, Ois. Belg.* p. 103 (1875).
Linaria montium, *Leach, Syst. Cat. Mamm. &c. Brit. Mus.* p. 15 (1816).
Cannabina flavirostris, *Brehm, Isis*, 1828, p. 1277; *id. Vög. Deutschl.* p. 278 (1831); *Cab. Mus. Hein.* Th. i. p. 162 (1850); *Degl. et Gerbe, Orn. Eur.* i. p. 290 (1867); *Salvad. Faun. Ital., Ucc.* p. 156 (1871); *Giglioli, Ibis*, 1882, p. 203; *id. Arif. Ital.* p. 35 (1886).
Cannabina montana, *Brehm, Isis*, 1828, p. 1277.
Cannabina media, *Brehm, Isis*, 1828, p. 1277; *id. Vög. Deutschl.* p. 279 (1831); *id. Vogelf.* p. 106 (1855).
Cannabina montium, *Brehm, Vög. Deutschl.* p. 278 (1831); *id. Vogelf.* p. 106 (1855).
Linaria montana, *Selby, Brit. B.* p. 318 pl. 55. fig. 5 (1833); *Gould, B. Eur.* iii. pl. 192 (1837); *Wright, Ibis*, 1869, p. 256.
Linaria flavirostris, *Macgill. Brit. B.* i. p. 379 (1837); *Thomps. B. Irel.* i. p. 272 (1849); *Gray, Hand-l. B.* ii. p. 109, no. 7645 (1870).
Linota montium, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838);

Yarr. Brit. B. i. p. 521 (1843); *Bp. & Schl. Monogr. Loxiens*, p. 45, pl. 50 (1850); *Bp. Consp.* i. p. 540 (1850); *Horsf. & Moore, Cat. B. Mus. E. I. Co.* ii. p. 496 (1856); *Jaub. et Barth. Lapomm. Rich. Orn.* p. 144 (1859); *Gould, B. Gt. Br.* iii. pl. 50; *R. Gray, B. West Scotl.* p. 149 (1871); *Irby, B. Gibr.* p. 121 (1875).

Acanthis montium, *Blyth, Cat. B. Mus. As. Soc.* p. 125 (1849).

Cannabina microrhynchos, *Brehm, Vogelf.* p. 106 (1855).

Linota montana, *Doderl. Avif. Sicil.* p. 84 (1869).

Linota flavirostris, *Saunders, Ibis*, 1869, p. 172; *Harting, Handb. Brit. B.* p. 28 (1872); *Newton, ed. Yarr. Brit. B.* ii. p. 160 (1876); *Dresser, B. Eur.* iv. p. 59, pl. 191 (1876); *Salvin, Cat. Strickl. Coll.* p. 206 (1882); *B. O. U. List Brit. B.* p. 54 (1883); *Booth, Rough Notes*, part viii. (1884); *Seebohm, Ibis*, 1882, p. 218; *Radde, Orn. Cauc.* p. 35 (1886).

Adult male. General colour above ruddy brown, broadly streaked with black down the centre of the feathers, those of the mantle and upper back with pale fulvescent margins; rump vinous, with a subterminal dusky shade on the feathers; lesser wing-coverts uniform ruddy brown; median and greater coverts dusky brown, edged with the same brown as the back, becoming paler and more whitish towards the end of the feathers; bastard-wing, primary-coverts, and quills blackish brown, edged with paler brown, the secondaries fringed with white at the ends, the brown margin not commencing till the middle of the feathers, so that their basal portion is entirely blackish; the inner primaries margined with white; upper tail-coverts blackish, with brown margins; tail-feathers blackish, edged with brown, all but the centre ones margined with white, and having a broad edging of white along the inner web, increasing in extent towards the outer feather; crown of head like the back and similarly streaked; lores and a tolerably distinct eyebrow reddish brown; ear-coverts and cheeks also reddish brown, the former streaked with blackish; throat and fore neck clear reddish brown, the latter with dusky-blackish streaks, broader and more distinct on the sides of the breast; centre of breast and abdomen white; sides of body and flanks dull reddish brown, streaked with blackish; thighs brown; under tail-coverts white; under wing-coverts white, with ashy bases; axillaries pale reddish brown, with blackish centres; quills below dusky, ashy along the inner edge. Total length 5 inches, culmen 0·35, wing 3, tail 2·3, tarsus 0·65.

In *summer plumage* the adult male only differs in being rather lighter, especially on the face and throat, which are paler and more tawny rufous; the sides of the neck are paler and more ashy fulvous, streaked with black.

Adult female. Similar to the male but wanting the vinous rump, this part being like the back and similarly streaked. Total length 5·3 inches, culmen 0·35, wing 3, tail 2·3, tarsus 0·6.

Young birds in first autumn plumage resemble the old female and differ from the adults in having dusky bills. The young males have a faint indication of a vinous tinge on the rump.

Hab. Europe generally, west of Russia and south of the Baltic, breeding in Scandinavia and the British Islands.

a, *b*. ♂ ad. ; *c*. ♀ ad. sk.	Orkneys, June.	Gould Coll.
d. Ad. ; *e*, *f*, *g*. Pull. st.	Orkneys.	Mr. J. Baker.
h. ♂ ; *i*, *k*, *l*. ♀ ad. sk.	Orkneys.	R. B. Sharpe, Esq. [P.].
m, *n*. ♂ ♀ ad. sk.	Norwich, Norfolk.	Gould Coll.
o. ♀ ad. sk.	Cambridgeshire, Jan. 1856.	Salvin-Godman Coll.
p, *q*, *r*. ♂ ad. ; *s*–*w*. ♀ ad. sk.	Cambridge, March 1857 (*F. D. G.*).	Salvin-Godman Coll.
x, *y*. ♂ ♀ ad. sk.	Burwell Fen, Cambridgeshire, Mar. 1856 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
z–*a'*. ♂ ♀ ad. sk.	Hampstead, Middlesex, Oct. 1869 (*R. B. S.*).	Hume Coll.
b'. ♂ ad. st.	Brighton, Sussex, March 1880.	R. B. Sharpe, Esq. [P.].
c', *d'*. ♂ ; *c'*, *f'*, *g'*. ♀ ad. sk.	Brighton, Oct. 1883.	R. B. Sharpe, Esq. [P.].
h'. ♀ ad. sk.	Brighton, Nov. 1883.	R. B. Sharpe, Esq. [P.].
i'. ♂ ad. sk.	Norway, March 11, 1880 (*R. Collett*).	Christiania Museum.
k'. ♀ ad. sk.	Norway, April 16, 1874 (*R. C.*).	Christiania Museum.
l'. ♀ ad. sk	Norway, Aug. 11, 1877 (*R. C.*).	Christiania Museum.
m'. ♂ ad. sk.	Norway, Dec. 10, 1876 (*R. C.*).	Christiania Museum.
n'. ♂ ad. ; *o'*, *p'*. ♀ ad. sk.	Malmö, Sweden, Nov. 23, 1873 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
q'. ♂ ad. sk.	Upsala, Dec. 2, 1883.	W. Meves [C.].
r'. ♂ ad. sk.	France (*F. Petit*).	E. Hargitt, Esq. [P.].

2. Acanthis brevirostris.

Linota brevirostris, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (*ex Gould, MS.*); *Moore, P. Z. S.* 1855, p. 216; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 496 (1856); *Leith-Adams, P. Z. S.* 1859, p. 184; *Pelz. Ibis*, 1868, p. 319; *Hume & Henders. Lahore to Yarkand*, p. 260, pl. 26 (1873); *Scully, Str. F.* 1876, p. 170; *Blanf. East. Persia*, ii. p. 250 (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 306 (1877); *Dresser, B. Eur.* iv. p. 65, pl. 192 (1878); *Biddulph, Ibis*, 1881, p. 86, 1882, p. 284; *Seebohm, Ibis*, 1883, p. 10; *Radde, Orn. Cauc.* p. 169 (1884).
Linaria montana (*nec Brehm*), *Dickson & Ross, P. Z. S.* 1839, p. 21.
Linaria brevirostris, *Gray, Hand-l. B.* ii. p. 109, no. 7647 (1870); *Hume, Str. F.* 1879, p. 108; *Scully, Ibis*, 1881, p. 578.
Linaria pygmæa, *Gray, t. c.* p. 109, no. 7648 (1870).
Acanthis flavirostris (*nec L.*), *Severtz. Turkest. Jevotn.* p. 64 (1873).
Acanthis brevirostris, *Severtz. J. f. O.* 1874, p. 438.
Linaria flavirostris (*nec L.*), *Dresser, Ibis*, 1875, p. 242.
Ægiothus brevirostris, *David & Oustalet, Ois. Chine*, p. 547 (1877).
Linota erythropyga, *Bogd. teste Seebohm.*
Fringilla brevirostris, *Seebohm, Hist. Brit. B.* ii. p. 112 (1884).

Adult male. General colour above brown, the feathers blackish in the centre, streaked with white, with which the dorsal feathers are edged, the hind neck whiter, with blackish streaks; lower back and rump rosy pink; lesser and median coverts reddish brown; greater coverts blackish, edged with brown and white at the ends; bastard-wing and primary-coverts blackish, narrowly edged with ashy white; quills blackish, externally margined with white, the secondaries browner, edged at the base and near the tips with whitish or paler brown, the centre of the feathers black to the edge of the outer web, imparting a pattern to the wing; upper tail-coverts white, blackish brown in the centre, the long ones brown edged with white; tail-feathers black, white on the outer web, the inner web also broadly margined with white, increasing in extent towards the outermost; crown of head like the back and similarly streaked; lores and a broad line above and below the eye, as well as the ear-coverts, cheeks, and throat creamy buff, with a brown shade on the ear-coverts; fore neck and breast ashy whitish, with broad blackish-brown centres to the feathers, especially on the fore neck; lower breast and abdomen pure white; sides of body and flanks white, streaked with brown; thighs creamy buff; under tail-coverts pure white; under wing-coverts and axillaries white; quills below dusky, white along the inner edge: "bill yellowish horny, brown on the culmen; legs and feet brown, claws dusky or black, with yellowish tips; iris brown" (*J. Scully*). Total length 5 inches, culmen 0·4, wing 2·95, tail 2·4, tarsus 0·6.

Adult female. Differs from the male in wanting the rose-colour on the rump and in being less broadly streaked on the breast: "bill greyish horny, yellowish at the base; legs and feet brownish-fleshy to brownish dusky; claws dusky brown; iris light or dark brown" (*J. Scully*). Total length 5·4 inches, culmen 0·35, wing 2·8, tail 2·3, tarsus 0·6.

The *adult male in winter plumage* is much lighter and more sandy than in summer, the rosy colour of the rump being obscured by sandy margins to the feathers. The under surface of the body is much paler and more sandy buff, and the streaks on the breast are less distinctly indicated.

The *young birds after the first moult* have the abdomen sandy buff instead of white, the whole under surface wearing a tawny appearance, with very narrow stripes on the breast.

Hab. From Asia Minor through Persia and Central Asia to Turkestan and Thibet, wintering near Gilgit in Upper Cashmere.

a. ♀ ad. sk.	Erzeroum.	India Museum.
b, c. ♂ ad. sk.	Erzeroum.	Gould Coll.
d. ♀ ad. sk.	Erzeroum.	Zoological Society. (Type of species.)
e. ♂ ad. sk.	Lake-regions of Northern Caucasus, May 12.	Purchased.
f. ♀ ad. sk.	Persia.	Purchased.
g. ♂ ad. sk.	Kokand, May 5, 1865 (*Dr. Severtzow*).	Gould Coll.

h, i. Ad.; *k.* ♀ ad. sk.	Fort Perowsk, Syr Darya, Nov. 17.	Dr. Severtzow [C.].
l, m. ♂ ♀ ad. sk.	Panja, Yarkand, April 1874 (*J. Biddulph*).	Hume Coll.
n. ♂ ad. sk.	Wakhan, April 20, 1874 (*J. Biddulph*).	Hume Coll.
o, p. ♂ ad. sk.	Yarkand (*Dr. Bellew*).	India Museum.
q, r. ♂; *s.* ♀ ad. sk.	Arpalik River, Aug. 12, 1878 (*Dr. G. Henderson*).	Hume Coll.
t. ♀ ad. sk.	Gilgit, April 1, 1880.	Dr. Scully [P.].
u, v. ♂ ad sk.	Gilgit, March 7, 1880.	Dr. Scully [P.].
w. Ad. sk.	Gilgit, Nov. 24, 1879.	Dr. Scully [P.].
x. Juv. sk.	Thibet, July 1876 (*L. Mandelli*).	Hume Coll.
y. Juv. sk.	Thibet, Sept. 1878 (*L. Mandelli*).	Hume Coll.

3. Acanthis cannabina.

The Red Linnet, cock and hen, *Albin, Nat. Hist. B.* p. 68, pl. 72 (1740, figg. pess.).

La Linotte, *Briss. Orn.* iii. p. 131 (1760); *Montb. Hist. Nat. Ois.* iv. p. 58, pl. 1 (1778).

La Grande Linotte de Vignes, *Briss. t. c.* p. 135; *Daubent. Pl. Enl.* iv. pl. 485. fig. 1.

La Linotte de Strasbourg, *Briss. t. c.* p. 146; *Daubent. t. c.* pl. 151. fig. 1.

Fringilla cannabina, *Linn. Syst. Nat.* p. 322 (1766); *Temm. Man. d'Orn.* p. 364 (1820); *Naum. Vög. Deutschl.* v. pl. 121 (1826); *Werner, Atlas, Granivores*, pl. 47 (1827); *Ménétr. Cat. rais. Cauc.* p. 40 (1832); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 184 (1840); *Selys-Longch. Faune Belge*, p. 73 (1842); *Schl. Rev. Crit.* p. lxii (1844); *Gray, Gen. B.* ii. p. 372 (1849); *Kjærb. Danm. Fugle*, pl. 27. fig. 1, *Suppl.* pl. 10. figs. 3, 4 (1852); *Schl. Vog. Nederl.* pl. 169 (1854); *Hewits. Eggs Brit. B.* p. 200, pl. 51. fig. 1 (1856); *Sundev. Svensk. Fogl.* pl. iii. figs. 1, 2 (1856); *Linderm. Vög. Griechenl.* p. 60 (1860); *Schl. Dier. Nederl., Vogels*, pl. 16. figs. 17, 18 (1861); *Harcourt, Ibis*, 1863, p. 230; *Gray, List Brit. B.* p. 97 (1863); *Sperling, Ibis*, 1864, p. 281; *More, Ibis*, 1865, p. 129; *Borygr. Vogelf. Deutschl.* p. 76 (1869); *Fritsch, Vög. Eur.* pl. 26. figs. 17, 18 (c. 1870); *Elwes & Buckley, Ibis*, 1870, p. 192; *Danf. & Harvie Brown, Ibis*, 1875, p. 413; *Fallon, Ois. Bely.* p. 102 (1875); *Seebohm, Hist. Brit. B.* ii. p. 106 (1884).

The Linnet, *Penn. Brit. Zool.* p. 110 (1776); *Lath. Gen. Syn.* ii. pt. 1, p. 302 (1783).

Greater Red-headed Linnet, *Penn. t. c.* p. 110 (1776).

Le Gyntel de Strasbourg, *Montb. Hist. Nat. Ois.* iv. p. 73 (1778).

La petite Linotte de Vignes, *Daubent. Pl. Enl.* iv. pl. 151. fig. 2.

Strasburg Finch, *Lath. Gen. Syn.* ii. pt. 1, p. 308 (1783).

Fringilla linota, *Gm. Syst. Nat.* i. p. 916 (1781); *Roux, Orn. Provenç.* pls. 91. 92.

Fringilla argentoratensis, *Gm. Syst. Nat.* i. p. 918 (1788).

Linaria linota, *Bechst. Naturg. Deutschl.* ii. p. 141 (1807).

Passer cannabina, *Pall. Zoogr. Rosso-Asiat.* ii. p. 26 (1811).

Passer papaverina, *Pall. t. c.* p. 27 (1811).

Ligurinus cannabinus, *Koch, Syst. baier. Zool.* p. 231 (1816).

Linaria cannabina, *Boie, Isis*, 1828, p. 554; *Selby, Brit. B.* p. 315

(1833); *Gould, B. Eur.* iii. pl. 191 (1837); *Macgill. Brit. B.* i. p. 371 (1837); *Thomps. B. Irel.* i. p. 269 (1849); *Salvin, Ibis*, 1859, p. 313; *Gray, Hand-l. B.* ii. p. 109, no. 7645 (1870); *Keulem. Onze Vog.* ii. pl. 45 (1873); *Dresser, Ibis*, 1875, p. 242; *id. B. Eur.* iv. p. 31, pl. 186 (1875).

Cannabina pinetorum, *Brehm, Isis*, 1828, p. 1277; *id. Vög. Deutschl.* p. 276 (1831).

Cannabina arbustorum, *Brehm, Isis*, 1828, p. 1277; *id. Vög. Deutschl.* p. 277 (1831).

Linaria vulgaris, *Rüpp. Neue Wirb.* p. 131 (1835).

Linota cannabina, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *Yarr. Brit. B.* i. p. 582 (1843); *Bp. Consp.* i. p. 539 (1850); *id. & Schl. Monogr. Loxiens.* p. 43, pl. 48 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 142 (1859); *Powys, Ibis*, 1860, p. 138; *A. Newton, Ibis*, 1863, p. 194; *Adams, Ibis*, 1864, p. 23; *Gould, B. Gt. Br.* iii. pl. 49; *Loche, Expl. Sci. Algér., Ois.* ii. p. 166 (1867); *Taylor, Ibis*, 1867, p. 65; *Drake, t. c.* p. 427; *Doderl. Avif. Sicil.* p. 83 (1869); *R. Gray, B. West. Scotl.* p. 147 (1871); *Saunders, Ibis*, 1871, p. 219; *Godman, Ibis*, 1872, p. 212; *Harting, Handb. Brit. B.* p. 27 (1872); *Shelley, B. Egypt*, p. 154 (1872); *Brooke, Ibis*, 1873, p. 247; *Durnf. Ibis*, 1874, p. 396; *Irby, B. Gibr.* p. 121 (1875); *Newt. ed. Yarr. Brit. B.* ii. p. 153 (1876); *Danf. Ibis*, 1878, p. 23; *Bogd. B. Cauc.* p. 66 (1879); *Salvin, Cat. Strickl. Coll.* p. 206 (1882); *B. O. U. List Brit. B.* p. 53 (1883); *Seeb. Ibis*, 1883, p. 10; *Irby, t. c.* p. 183; *Chapm. Ibis*, 1884, p. 82; *Saunders, t. c.* p. 376; *Radde, Orn. Cauc.* p. 167 (1884); *Whitehead, Ibis*, 1885, p. 40; *Reid, t. c.* p. 245; *Tait, Ibis*, 1887, p. 195.

Cannabina linaria, *Rüpp. Syst. Uebers.* p. 77 (1845).

Cannabina linota, *Gray, List Gen. B.* 1840, p. 45; *Cab. Mus. Hein.* Th. i. p. 161 (1850); *Degl. et Gerbe, Orn. Eur.* i. p. 288 (1867); *Heugl. Orn. N.O.-Afr.* p. 644 (1869); *Salvad. Faun. Ital., Ucc.* p. 155 (1871); *Giglioli, Iconogr. Avif. Ital.* pt. 23 (1883); *id. Avif. Ital.* p. 34 (1886); *Salvad. Elench. Ucc. Ital.* p. 177 (1887).

Acanthis cannabina, *Blyth, Cat. B. Mus. As. Soc.* p. 125 (1849); *Severtz. Turkest. Jevotn.* p. 64 (1873).

Cannabina major, *Brehm, Vogelf.* p. 106 (1855).

Cannabina minor, *Brehm, t. c.* p. 106 (1855).

Linota linaria, *Seebohm, Ibis*, 1882, p. 218.

Adult male. General colour above warm reddish brown, with a few indistinct black shaft-lines on the feathers of the mantle and upper back; rump paler than the back, with sandy rufous edges to the feathers; wing-coverts like the back, the inner greater coverts with slightly paler edges; bastard-wing and primary-coverts blackish edged with brown; quills blackish, the primaries externally white excepting the first; the secondaries tipped with white and edged with rufous-brown, the innermost entirely of the latter colour and resembling the back; upper tail-coverts black, edged with ashy white; tail-feathers black, edged with white externally, the inner web also edged with white, increasing in extent towards the outer feathers, which have the inner half of the inner web entirely white; crown of head, occiput, nape, and hind neck ashy brown, somewhat streaked with mesial blackish spots on the crown, some of the feathers of which are paler edged; base of forehead ashy succeeded by a sinci-

pital patch of crimson; lores and a streak above and below the eye buffy white; ear-coverts and sides of face ashy, darker on the cheeks; the fore part of the ear-coverts with a dull whitish spot; throat buffy white, minutely spotted with brown; fore neck and chest crimson, widening out into a horseshoe form on the upper breast; the breast and abdomen dull buffy white; sides of body and flanks pale reddish brown, mottled with darker brown centres to the feathers, and flushed with a slight crimson tint; thighs sandy buff; under tail-coverts white with a sandy-buff tinge; under wing-coverts and axillaries white, the latter slightly tinged with sandy buff; quills below dusky, ashy white along the inner edge. Total length 5·5 inches, culmen 0·4, wing 3·05, tail 2·25, tarsus 0·65.

Adult female. Browner than the male and not so rufous, the head and neck ashy: all the upper surface streaked with dusky-blackish centres to the feathers; no frontal patch of crimson and no crimson on the breast, the latter being sandy buff as also the sides of the body and flanks, both being streaked with dark brown; wings and tail as in the adult male. Total length 5·3 inches, culmen 0·4, wing 3, tail 2·1, tarsus 0·6.

Nestling. Resembles the old female, but is more reddish brown; the head like the back, but the latter streaked with blackish brown; wings and tail as in the adult, but the white edgings to the quills and tail-feathers washed with rufous-brown towards the tips; sides of face reddish brown like the crown, the spots above and below the eye and on the lower ear-coverts sandy buff; under surface of body white, washed with sandy buff on the breast and sides of the body; throat spotted with dusky brown; fore neck and breast streaked with dusky brown, very narrow and indistinct on the flanks; the lower breast spotted with dark brown.

This plumage is maintained till the early part of September, when both young and old birds moult. The series in the British Museum appears to prove that the young of both sexes become, during their first winter, very like the adult female, the only difference being that the male is more spotted underneath, the lower breast still retaining its spotted character as in the first plumage, and the bases to the feathers of the fore neck and breast being dusky brown and rounded, not streaked as in the female. The crimson breast of the male in its first year is not so rich as in the more mature birds, and sometimes there is scarcely any red at all on the breast, whilst occasionally the colour is yellow instead of crimson.

The old males after their moult, although appearing at a first glance to resemble the old females, will be found to have the crimson of the breast and of the crown well developed (the latter less strongly indicated), but in each case obscured by broad pale edgings to the feathers. These wear off as the spring advances and leave the red in full perfection. The tint of the crimson varies greatly in depth, occasionally approaching scarlet. The richness of the colour on the forehead and breast appears to increase with the age of the birds, and some brightly coloured males have also a tinge of crimson on the rump. [*Cf.* Hancock, Trans. North. & Durham, vi. p. 53.]

Continental specimens and those Linnets which leave our shores

in the autumn are brighter in spring than the resident English Linnets, the males being more brilliant and the females more purely coloured than English specimens, which are always darker.

Eastern specimens show an approach to the brighter-coloured *A. fringillirostris*, and resemble this race in the whitish edgings to the primary-coverts. A more complete series would probably show a perfect intergradation between these two forms, which at the best can only be regarded as representative races.

Hab. Europe generally, extending eastwards to Turkestan (but replaced, as a rule, in the east by the closely-allied *A. bella*). N.E. Africa, Madeira, and the Canaries.

a, b. ♂ ♀ ad. st.	Leicestershire.	Theodore Walker, Esq. [P.].
c, d, e. Pull. st.	Norfolk, June.	Dr. Günther [P.].
f, g. Pull. st.	Saffron Walden, Essex.	J. Clark, Esq. [P.].
h. ♂ ad. sk.	Cambridgeshire (*J. Baker*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Cambridgeshire, Feb. 1857 (*F. D. G.*).	Salvin-Godman Coll.
k. ♂ ad.; *l.* Juv. sk.	Southwell, Notts, Oct. 1.	Rev. W. Beecher [P.].
l'. Var. sk.	Near London.	J. F. Stephens, Esq. [P.].
m. ♀ ad. sk.	Hampstead, Middlesex.	J. E. Harting, Esq. [P.].
n. ♂ ad. sk.	Hampstead, April 1867.	J. E. Harting, Esq. [P.].
o. ♂ ad.; *p.* ♀ juv. sk.	Hampstead, Oct. 1869 (*R. B. S.*).	Hume Coll.
q. ♀ ad. sk.	Kingsbury, Middlesex.	J. E. Harting, Esq. [P.].
r–w. ♂ ad.; *x–d'.* ♀ ad. sk.	Hanwell, Middlesex, Feb. 1885.	R. B. Sharpe, Esq. [P.].
e'. ♂ ad. sk.	Cookham, Berks, April 14, 1869 (*R. B. S.*).	Hume Coll.
f', g'. Juv. sk.	Maidenhead, Berks, June 1859 (*J. G.*).	Gould Coll.
h'. ♀ ad. sk.	Iffley, Oxford, Oct. 31, 1877.	J. T. Mallam, Esq. [P.].
i'. ♂ ad. st.	Brighton, Sussex, April 1883.	R. B. Sharpe, Esq. [P.].
k'–y'. ♂ ad.; *z'–ζ.* ♀ ad. sk.	Near Brighton, April 1884.	R. B. Sharpe, Esq. [P.].
η, θ. ♂ ad. sk.	Brighton, Nov. 1883.	R. B. Sharpe, Esq. [P.].
ι. ♂ ad.; *κ, λ, μ, ν.* Juv. sk.	Pagham, Sussex, Sept.	R. B. Sharpe, Esq. [P.].
ο, π, ρ, σ. ♂ ad.; *τ, υ.* ♀ ad. sk.	Avington, Hants, Feb. 1880.	R. B. Sharpe, Esq. [P.].
φ. ♂ ad. sk.	Avington, May 12.	R. B. Sharpe, Esq [P.].
χ. ♀ ad. st.	Dorsetshire, May.	R. B. Sharpe, Esq. [P.].
ψ. Var. alb. sk.	Devonshire.	Montagu Coll.
ω. ♂ ad. sk.	Axmouth, Devonshire, Oct. 28, 1882.	R. B. Sharpe, Esq. [P.].
a'. ♂ ad. sk.	Wales, July 24, 1869.	Hume Coll.

β'. ♂ ad. sk.	Havre, France, May 6, 1876 (*V. Pluche*).	E. Hargitt, Esq. [P.].
γ'. ♂ ad. sk.	Belgium, April 1846.	Brussels Museum [P.].
δ'. ♂ ad. sk.	Norway, Oct. 31, 1880 (*R. Collett*).	Christiania Museum [P.].
ϵ'. ♂ ad. sk.	Skåne, S. Sweden, Feb. 11, 1873 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
ζ'. ♀ ad. sk.	Rome, Italy, Oct. 1884.	Prof H. H. Giglioli [P.].
η'. ♂ ad. sk.	Vienna.	R. B. Sharpe, Esq. [P.].
θ'. ♂ ad. sk.	Buyukdere Hills, Turkey, April 2 (*T. Robson*).	R. B. Sharpe, Esq. [P.].
ι'. ♂ ad. sk.	Egypt, Nov. 13, 1875.	J. H. Gurney, Esq. [P.].
κ'. ♂ ad. sk.	Malta, April 16, 1861.	Gould Coll.
λ'. ♂ ad. sk.	Malta, Feb. 1854.	Gould Coll.
μ'. ♂ ad. sk.	Near Gibraltar, March 15, 1870 (*L. H. Irby*).	Hume Coll.
ν', ξ'. ♂ ad. sk.	Madeira, June 27, 1871 (*F. D. G.*).	Salvin-Godman Coll.
o', π'. ♂ ad. sk.	Orotava, Teneriffe, April 1871 (*F. D. G.*).	Salvin-Godman Coll.
ρ', σ'. Skeletons.	England.	Purchased.
τ'. Skull.	England.	Purchased.
υ', ϕ', χ', ψ'. Skulls.	S. Germany.	Dr. Günther.

Subsp. *a*. **Acanthis fringillirostris.**

Linota fringillirostris, *Bp. & Schl. Monogr. Loxiens*, p. 45, pl. 49 (1850); *Bp. Consp.* i. p. 533 (1850); *Finsch, Verh. zool.-bot. Gesellsch. Wien*, 1879, p. 206; *Blyth, Ibis*, 1870, p. 172.
Cannabina fringillirostris, *Cab. Mus. Hein.* Th. i. p. 161, note (1850).
Cannabina bella, *Cab. Mus. Hein.* Th. i. p. 161, note (1850).
Linota linaria, *Tristr. Ibis*, 1859, p. 34.
Linaria fringillirostris, *Gray, Hand-l. B.* ii. p. 110, no. 7656 (1870).
Acanthis cannabina, *β.* bella, *Severtz. Turkest. Jevotn.* p. 64 (1873).
Linaria cannabina *Dresser, Ibis*, 1875, p. 242 (pt.); *Blanf. East. Persia*, ii. p. 249 (1876); *Hume, Str. F.* 1879, pp. 108, 389; *Bidd. Ibis*, 1881, p. 86; *Scully, t. c.* p. 579; *Bidd. Ibis*, 1882, p. 285.
Linota bella, *Bogd. B. Cauc.* p. 65 (1879); *Severtz. Ibis*, 1883, p. 57.
Cannabina sanguinea, *Homeyer & Tancré, MT. Orn. Ver. Wien*, 1883, p. 89.
Fringilla fringillirostris, *Seebohm, Hist. Brit. B.* ii. p. 106 (1884).
Linota erythropyga, *Bogd., teste Seebohm, Ibis*, 1883, p. 10.
Linota cannabina, var. bella, *Radde, Orn. Cauc.* p. 167 (1884).
Linota cannabina, *Tristr. Faun. & Flor. Palest.* p. 70 (1884).

Adult male. Similar to the male of *A. cannabina*, but everywhere paler in colour, more ashy about the hind neck, the red breast more scarlet in tint, and distinguished further by the primary-coverts being edged with white like the primaries; the back perfectly uniform chestnut. Total length 5·3 inches, culmen 0·4, wing 3·15, tail 2·4, tarsus 0·65.

Adult female. Similar to the female of *A. cannabina*, but always paler in colour. Total length 5·3 inches, culmen 0·4, wing 3·15, tail 2·2, tarsus 0·6.

Hab. From Asia Minor to the Caucasus, eastward to Persia and Central Asia, probably wintering in Palestine, Arabia, and Northern Cashmere.

a. ♀ ad. sk.	Smyrna, Nov. 5, 1871 (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
b. ♀ ad. sk.	Tyre.	Canon Tristram [C.].
c. ♂ ad. sk.	Nazareth.	Canon Tristram [C.].
d. ♀ ad. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll.
e. ♂ ad. sk.	Persia.	Purchased.
f. ♂ ad.; *g*, *h.* ♀ juv. sk.	Pass to Anan, Elburz Mountains, Aug. 1872.	W. T. Blanford, Esq. [C.].
i. ♀ juv. sk.	Pass to Anan, Elburz Mountains, Aug. 1872 (*W. T. Blanford*).	Hume Coll.
k. ♂ ad. sk.	Karij Valley, Elburz Mountains, Aug. 9 (*W. T. Blanford*).	Hume Coll.
l. ♀ ad. sk.	Shiraz, Nov. 1870.	Sir O. St. John [C.].
m. ♂ ad. sk.	Manrak Geb, near Saisan, May 28 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
n. ♂ ad. sk.	Dowlutpur, Sind (*J. A. Murray*).	Hume Coll.
o. ♀ ad sk.	Gilgit, Dec. 30 (*J. Biddulph*).	Hume Coll.
p, *q.* ♂; *r*, *s.* ♀ ad. sk.	Gilgit, Feb. (*J. Biddulph*).	Hume Coll.

4. Acanthis linaria.

The Mealy Redpoll.

La petite Linotte le Vignes, *Briss. Orn.* iii. p. 138 (1760).

Fringilla linaria, *Linn. Syst. Nat.* i. p. 322 (1766); *Wilson, Amer. Orn.* iv. p. 42, pl. 30. fig. 4 (1811); *Temm. Man. Orn.* i. p. 373 (1820); *Naum. Vög. Deutschl.* v. pl. 126 (1826); *Werner, Atlas, Granivores*, pl. 51 (1827); *Audub. B. Amer.* pl. 375; *id. Orn. Biogr.* iv. p. 533 (1838); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 185 (1840); *Selys-Longchamps, Faun. Belge*, p. 73 (1842); *Kjærb. Danm. Fugle*, pl. 27. fig. 4, Suppl. 10. fig. 6 (1852); *Schl. Vög. Nederl.* p. 171 (1854); *Linderm. Vög. Griechenl.* p. 60 (1860); *Schl. Dier. Nederl., Vog.* pl. 16. figs. 15, 16 (1861); *Reinh. Ibis*, 1861, p. 7; *Borggr. Vogelf. Norddeutschl.* p. 75 (1869); *Fritsch, Vog. Eur.* tab. 28. figs. 15, 16 (1870); *Fallon, Ois. Belg.* p. 104 (1875); *Tschusi, J. f. O.* 1875, p. 409; *Seebohm, Hist. Brit. B.* ii. p. 117 (1884).

Fringilla flammea, *Linn. Syst. Nat.* i. p. 322 (1766).

Fringilla vitis, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 163 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 254.

Le Sizerin, *Montb. Hist. Nat. Ois.* iv. p. 216 (1778).

Passer linaria, *Pall. Zoogr. Rosso-Asiat.* ii. p. 25 (1811).

Spinus linaria, *Koch, Syst. baier. Zool.* p. 233 (1816).

Linaria borealis, *Vieill. Mem. R. Accad. Sci. Torino*, xxiii. *Sc. Fis.* p. 199 (1816); *Roux, Orn. Provenç.* pls. 101, 102 (1825); *Macgill. Brit. B.* i. p. 388 (1837); *Doderl. Avif. Sicil.* p. 84 (1869); *Gray, Hand-l. B.* ii. p. 110, no. 7653 (1870); *Dresser, Ibis*, 1875, p. 242.

Linaria minor, *Leach, Syst. Cat. Mamm. etc. Brit. Mus.* p. 15 (1816); *Swains. Faun. Bor.-Amer., Birds*, p. 267 (1831); *Jard. ed. Wils. Amer. Orn.* ii. p. 33 (1832); *Audub. B. Amer.* 8vo, iii. p. 122, pl. 179 (1841); *E. Adams, Ibis*, 1878, p. 425.

Linaria agrorum, *Brehm, Vög. Deutschl.* p. 281 (1831).

Linaria betularum, *Brehm, l. c.* p. 282 (1831); *Sundev. Œfv. Vet.-Akad. Förh. Stockh.* 1840, p. 59.

Linaria canescens, *Gould, B. Eur.* iii. pl. 193 (1834).

Linota borealis, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *Yarr. Brit. B.* i. p. 308 (1843).

Fringilla canescens, *Schl. Rev. Crit.* p. lxiii (1844); *Gray, Gen. B.* ii. p. 372 (1849); *Hewits. Eggs Brit. B.* p. 202, pl. 51* (1856).

Fringilla borealis, *Gray, Gen. B.* ii. p. 372 (1849); *id. List Brit. B.* p. 99 (1863).

Acanthis linaria, *Bp. & Schl. Monogr. Loxiens*, pl. 52 (1850); *Bp. Consp.* i. p. 541 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 141 (1859); *Bettoni, Ucc. nidif. Lomb.* i. pl. 70 (1865); *Dybowski & Parvex, J. f. O.* 1868, p. 335; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Taczan. J. f. O.* 1873, p. 92, 1874, p. 335, 1876, p. 200; *id. Bull. Soc. Zool. France*, 1876, p. 180, 1882, p. 394; *Dybowski, Bull. Soc. Zool. France*, 1883, p. 365; *Stejneger, Auk*, i. p. 152 (1884); *Turner, Proc. U. S. Nat. Mus.* viii. p. 239 (1885); *A. O. U. Check-list N. Amer. B.* p. 260 (1886); *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 252 (1886).

Ægiothus linaria, *Cab. Mus. Hein.* Th. i. p. 161 (1850); *Baird, B. N. Amer.* p. 428 (1858); *Coues, Proc. Philad. Acad.* 1861, pp. 222, 381; *Blakist. Ibis*, 1863, p. 71; *Baird, Ibis*, 1867, pp. 281, 286; *Brown, Ibis*, 1868, p. 421; *Dall & Bann. Trans. Chicago Acad.* i. p. 281 (1869); *Gould, B. Gt. Br.* iii. pl. 51 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 156 (1871); *Swinh. Ibis*, 1874, p. 160; *David & Oustalet, Ois. Chine*, p. 336 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 245; *Bolau, J. f. O.* 1880, p. 127, 1882, p. 335; *Giglioli, Ibis*, 1881, p. 203; *Jouy, Proc. U. S. Nat. Mus.* vi. p. 297 (1883); *Nelson, Cruise 'Corwin,'* p. 68 (1883); *Coues, Key N. Amer. Birds*, 2nd ed. p. 352 (1884); *Murdoch, Exped. Pt. Barrow*, p. 105 (1885); *Giglioli, Avif. Ital.* p. 36 (1886); *Salvad. Elench. Ucc. Ital.* p. 177 (1887).

Linaria robusta† etc., *Brehm, Vogelf.* p. 107 (1855).

Cannabina linaria, *Swinh. Ibis*, 1861, p. 335.

Ægiothus fuscescens, *Coues, Proc. Philad. Acad.* 1861, pp. 222, 381.

Ægiothus canescens, *Swinh. P. Z. S.* 1863, p. 299; *Blakist. Ibis*, 1863, p. 71.

Fringilla linaria brevirostris, *Holmgr. Skand. Fogl.* i. p. 328 (1866).

Fringilla rufescens (*nec V.*), *Elwes & Buckley, Ibis*, 1870, p. 193.

Ægiothus borealis, *Swinh. P. Z. S.* 1871, p. 386; *Coues, B. N.-West*, p. 114 (1874).

Linaria linaria, *Gray, Hand-l. B.* ii. p. 109, no. 7649 (1870).

Linaria fuscescens, *Gray, t. c.* p. 110, no. 7655 (1870).

Ægiothus linaria, var. fuscescens, *Coues, Key N. Amer. B.* p. 131 (1872).

Linota linaria, *Harting, Handb. Brit. B.* p. 28 (1872); *Newt. ed. Yarr. Brit. B.* ii. p. 133 (1876); *Dresser, B. Eur.* iv. p. 37, pl. 187 (1877); *Finsch, Verh. zool.-bot. Gesellsch. Wien*, xxix. p. 206 (1879); *Salvin, Cat. Strickl. Coll.* p. 206 (1882); *B. O. U. List Brit. B.* p. 53 (1883); *Homeyer & Tancré, MT. Orn. Ver. Wien*, 1883, p. 89; *Brooks, Ibis*, 1884, p. 234, 1885, p. 381; *Radde, Orn. Cauc.* p. 170 (1884).

Ægiothus rufescens (*nec V.*), *Alston & Harvie Brown, Ibis*, 1873, p. 64.

Ægiothus linarius, var. linarius, *Baird, Brewer, & Ridgway, Hist. N. Amer. B.* i. p. 493, pl. 22. figs. 3, 5 (1874).

Linota rufescens (*nec V.*), *Seebohm & Harvie Brown, Ibis*, 1876, p. 116; *Blakist. & Pryer, B. Japan*, p. 174 (1882).

Acanthis intermedius, *Dybowski, Bull. Soc. Zool. France*, viii. p. 366 (1883).

† In this book are given several other meaningless synonyms, for which the student is referred to the work itself, or to Dresser's 'Birds of Europe,' where they have been deemed worthy of repetition.

Acanthis innominatus, *Dybowski, t. c.* p. 366 (1883).
Acanthis linaria pallescens, *Stejneger, Auk*, i. p. 147 (1884).
Linota ordinaria, *Stejneger, t. c.* p. 147.
Linota parvirostris, *Stejneger, t. c.* p. 147.
Linota betularum, *Stejneger, t. c.* p. 147.
Linota rufescens (*nec V.*), *Wilson, Ibis*, 1887, p. 141.

Adult male. General colour above light brown, streaked with blackish brown down the centre of the feathers, the hind neck and sides of neck paler; the rump ashy white, streaked with blackish brown and slightly tinged with rosy; lesser wing-coverts light brown; median and greater coverts dusky blackish, edged with light brown and tipped with sandy buff or creamy white, forming a double wing-bar; bastard-wing and primary-coverts dusky blackish, edged with ashy brown; quills dusky blackish, edged with ashy brown, the secondaries with light brown, all fringed with whitish at the tips, the innermost secondaries more broadly tipped on the outer web; upper tail-coverts and centre tail-feathers dusky brown edged with pale brown, the latter also white along the inner web, increasing towards the outer feathers; hinder crown like the back; the entire forehead and vertex dark crimson; base of forehead and nasal plumes dusky blackish; lores dusky, surmounted by a broad eyebrow of creamy white tinged with brown; eyelid and a small streak below the eye creamy white; ear-coverts light brown like the sides of the face and cheeks, the latter suffused with rosy; chin-spot black; rest of throat, fore neck, and breast rosy pink, the feathers edged with hoary white; abdomen white, with a slight suffusion of pink; sides of body and flanks creamy buff, slightly washed with light brown and streaked with blackish brown, more broadly on the latter; thighs light brown; under tail-coverts white, the longer ones with blackish centres; under wing-coverts and axillaries white, with ashy-brown bases; quills below dusky, ashy whitish along the inner edge. Total length 5·2 inches, culmen 0·4, wing 2·85, tail 2·05, tarsus 0·6.

In full summer plumage the adult male loses the ashy-whitish tips to the feathers of the throat and breast, so that these parts become very fine and uniform rosy; the streaks on the sides of the body are also somewhat intensified. The plumage becomes much worn and abraded during the breeding-season, when the light edges to the feathers get worn off, and a more uniform appearance is put on.

Adult female. Similar to the male, but wanting the rosy colour on the throat, breast, and rump; the chin and upper throat black; the remainder of the under surface white, with blackish streaks on the sides of the body. Total length 5 inches, culmen 0·35, wing 2·75, tail 2·05, tarsus 0·55.

Young. Resembles the old female, but has no red on the crown, the head being like the back and streaked with whitish in the same manner; rump much paler than the back and mixed with white; wing-coverts broadly tipped with sandy buff, forming two distinct wing-bars; no black on the throat; remainder of under surface white, tinged with yellow on the abdomen; the breast and flanks spotted with broad marks of black.

The young bird, after the first autumn moult, is much yellower

and more sandy buff than in the full winter plumage, when the sandy-coloured edges become more or less abraded and the colour duller. The red forehead and the black throat are fully developed in the first winter plumage, and in the male can be detected a slight tinge of rosy colour on the breast. The majority of the males in their first winter cannot be distinguished from the adult females, and it is apparently only very old birds which have the red on the breast and rump.

Hab. Northern Europe, across Siberia to North America, wintering in more southern localities.

a, b. Ad. st.	Inverness, N.B.	Mr. J. Baker.
c, d. ♂ ad. sk.	Cambridge, March 10, 1856 (*O. S.*). (Wings 2·9–2·95*.)	Salvin-Godman Coll.
e, f, g, h. ♀ ad. sk.	Cambridge, March 10, 1856 (*O. S.*). (Wings 2·7–2·8.)	Salvin-Godman Coll.
i. ♂ imm. sk.	Cambridge, March 10, 1856 (*O. S.*). (Wing 3·0.)	Gould Coll.
k. ♂ ad. sk.	Richmond, Surrey, Dec. 27, 1881. (Wing 2·85.)	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Europe. (Wing 3·0).	Gould Coll.
m. Ad. sk.	Varanger Fjord, Finmark, July 16, 1866 (*Esmark*). (Wing 2·9.)	Christiania Mus. [P.].
n. ♂ ad. sk.	Bjoberg, Norway, Aug. 12, 1877 (*R. Collett*). (Wing 2·8.)	Christiania Mus. [P.].
o. ♂ ad. sk.	Bodö, Norway, June 9, 1857 (*P. Godman*). (Wing 2·9.)	Salvin-Godman Coll.
p, q. ♀ ad. sk.	Bodö, June 19, 1857 (*P. G.*). (Wing 2·8.)	Salvin-Godman Coll.
r. ♀ ad. sk.	S. Norway, April 12, 1859 (*P. G.*). (Wing 2·9.)	Salvin-Godman Coll.
s. ♂ ad. sk.	Borregaard, Norway, April 12 (*F. Godman*). (Wing 2·8.)	Salvin-Godman Coll.
t, u. ♂ ad. sk.	Dovrefjeld, Norway, July 4 (*J. G.*). (Wings 2·85–2·9.)	Gould Coll.
v. ♂ ad. sk.	Sweden. (Wing 2·95.)	J. E. Harting, Esq. [P.].
w. ♂ ad. sk.	Sweden, June 4 (*H. Wheelwright*). (Wing 2·85.)	Gould Coll.
x. ♀ ad. sk.	Sweden, July 2 (*H. Wheelwright*). (Wing 2·8.)	Gould Coll.
y. ♂ ad. sk.	Sweden (*H. Wheelwright*). (Wing 2·85.)	Hume Coll.
z. ♂ ad. sk.	Sweden, March (*W. Meves*). (Wing 2·9.)	Hume Coll.
a'. ♂ ad. sk.	Stockholm, Feb. (*W. Meves*). (Wing 3·0.)	Hume Coll.
b'. ♂ ad. sk.	Finland. (Wing 2·85.)	Gould Coll.
c'. ♂ ad. sk.	Altenburg, S. Germany. (Wing 2·9.)	Hume Coll.
d'. ♂ ad. st.	France.	R. B. Sharpe, Esq. [P.].
e'. ♂ ad. sk.	France. (Wing 2·85.)	Hume Coll.

* I have given the measurements of the wing in this and the allied species, to assist comparison with the series measured by Dr. Stejneger (*l. c.*).

f'. ♂ ad. sk.	Besançon, France (*F. Petit*). (Wing 2·9.)	E. Hargitt, Esq. [P.].
g'. ♂ ad. sk.	Ust Zylma, Petchora River, May 20, 1875 (*H. S. & J. A. H. B.*). (Wing 2·9.)	Henry Seebohm, Esq. [P.].
h'. ♂ ad. sk.	Petchora River, May (*H. S. & J. A. H. B.*). (Wing 2·85.)	Major Feilden and J. A. Harvie Brown, Esq. [P.].
i'. Juv. sk.	Schtschutschja, Ob River, July 31 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
k'. ♀ ad. sk.	Schtschutschja, July 20 (*O. F.*). (Wing 2·85.)	R. B. Sharpe, Esq. [P.].
l'. ♀ juv. sk.	Schtschutschja, July 31 (*O. F.*).	R. B. Sharpe, Esq. [P.].
m', *n'*. Juv. sk.	River Ob, Aug. (*O. F.*).	R. B. Sharpe, Esq. [P.].
o', *p'*. ♂ ad. sk.	Samarova, Oct. 1 (*O. F.*). (Wings 2·85–2·9.)	R. B. Sharpe, Esq. [P.].
q'. Juv. sk.	Samarova, Oct. 1 (*O. F.*).	Geogr. Soc. Bremen.
r'. ♂ ad. sk.	Onon River, May 5, 1873 (*Dybowski*). (Wing 2·85.)	R. B. Sharpe, Esq. [P.].
s', *t'*. Ad. sk.	Japan. (Wing 2·75.)	Gould Coll.
u'. Ad. sk.	North America.	Hume Coll.
v'. Ad. st.	North America.	Purchased.
w'. ♂ ad. sk.	Fort Yukon, Alaska, Feb. 26, 1876 (*L. M. Turner*). (Wing 2·8.)	U.S. Nat. Museum.
x'. Ad. sk.	Simiahmoo (*Kennerley*). (Wing 2·8.)	Sclater Coll.
y', *z'*. ♂ ad. sk.	Fort Simpson. (Wings 2·85–3·05.)	B. R. Ross, Esq. [P.].
a. ♀ ad. sk.	Fort Simpson. (Wing 2·8.)	B. R. Ross, Esq. [P.].
β. ♂ ad. sk.	Bear Lake (*B. R. Ross*). (Wing 2·95.)	Sclater Coll.
γ. Ad. sk.	Red River (*Gunn*). (Wing 2·85.)	Sclater Coll.
δ. Ad. sk.	Canada. (Wing 2·85.)	Gould Coll.
ε. ♀ ad. sk.	Canada. (Wing 3·0.)	Salvin-Godman Coll.
ζ. Ad. sk.	Repulse Bay. (Wing 2·75.)	Dr. Rae [P.].
η. Ad. sk.	Arctic America.	Admiral Sir G. Back [P.].
θ. ♂ ad. sk.	Fort Chimo, Labrador, May 25 1884 (*L. M. Turner*). (Wing 3·0.)	Sclater Coll.
ι. ♀ ad. sk.	Fort Chimo, June 9, 1883 (*L. M. T.*). (Wing 2·75.)	Sclater Coll.
κ. ♂ ad. sk.	Fort Chimo, July 2, 1882 (*L. M. T.*). (Wing 2·8.)	Salvin-Godman Coll.
λ. ♀ ad. sk.	Fort Chimo, May 26, 1883 (*L. M. T.*). (Wing 2·85.)	Salvin-Godman Coll.
μ. Juv. sk.	Fort Chimo, Aug. 30, 1882 (*L. M. T.*).	Salvin-Godman Coll.
ν. ♂ ad. sk.	Sing Sing, New York, Dec. 18, 1882 (*A. K. Fisher*). (Wing 2·8.)	R. B. Sharpe, Esq. [P.].
ξ, *o*. Ad. sk.	Garrisons, N. Y., Jan. 16, 1875 (*Roosevelt*). (Wing 2·85.)	U. S. Nat. Mus. [P.].

π. ♀ ad. sk.	S. Stephen's, New Brunswick, (*G. A. Boardman*; Sm. no. 77105). (Wing 2·85.)	U. S. Nat. Mus. [P.].
ρ. ♂ ad. sk.	New Brunswick (*Osburn*). (Wing 2·8.)	Sclater Coll.
σ. ♀ ad. sk.	Fort George (*Drexler*; Sm. no. 20649). (Wing 2·75.)	Sclater Coll.
τ. ♂ ad. sk.	New Haven, Conn., Jan. 2, 1878 (*H. Warner*).	R. B. Sharpe, Esq. [P.].
υ. ♀ ad. sk.	Riversdale, Illinois, March 11, 1875 (*E. W. Nelson*). (Wing 2·8.)	Salvin-Godman Coll.
ϕ. ♂ ad. sk.	Stark Co., Indiana (*H. K. Coale*). (Wing 3·0.)	R. B. Sharpe, Esq. [P.].
χ, ψ. ♀ ad. sk.	Stark Co., Indiana, Jan. 1, 1884 (*H. K. Coale*). (Wings 2·75–2·8.)	R. B. Sharpe, Esq. [P.].
ω. ♂ ad. sk.	Colville, British Columbia. (Wing 3·0.)	J. K. Lord, Esq. [P.].
a'. ♂ ad. sk.	Quebec, District Columbia (Sm. no. 294567). (Wing 3·0.)	Salvin-Godman Coll.
β', γ', δ'. Skeletons.	N. America.	Purchased.
ϵ', ζ'. Skulls.	S. Germany.	Dr. Günther [C.].

Subsp. *a*. Acanthis holboelli.

Linaria holboelli, *Brehm, Vög. Deutschl.* p. 280 (1831); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 59; *Gray, Hand-l. B.* ii. p. 110, no. 7652 (1870); *Fallon, Ois. Belg.* p. 105, note (1875); *Homeyer, J. f. O.* 1879, p. 184; *Dybowski, Bull. Soc. Zool. France,* viii. p. 365 (1883).

Linaria alnorum, *Brehm, Vög. Deutschl.* p. 280 (1831); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 59.

Fringilla linaria alnorum, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 59.

Fringilla canescens (*nec Gould*), *Selys-Longch. Faune Belge,* p. 73 (1842).

Acanthis holboelli, *Bp. & Schl. Monogr. Loxiens,* pl. 53 (1850); *Bp. Consp.* i. p. 541 (1850); *Selys-Longch. Rev. Zool.* 1857, p. 120; *Tacz. Bull. Soc. Zool. France,* i. p. 180 (1876).

Linaria longirostris, *Brehm, Vogelf.* p. 107 (1855).

Ægiothus holboelli, *Coues, Proc. Philad. Acad.* 1861, p. 385.

Fringilla linaria magnirostris, *Holmgr. Skand. Fogl.* i. p. 328 (1866).

Linaria brunnescens, *Homeyer, J. f. O.* 1879, p. 184.

Linaria alnorum magnirostris, *Meves, teste Homeyer, J. f. O.* 1880, p. 155.

Acanthis linaria holboelli, *Stejneger, Auk,* i. p. 153 (1884); *A. O. U. Check-list N. Amer. B.* p. 260 (1886); *Stejneger, Bull. U. S. Nat. Mus.* no. 28, p. 256 (1886).

Adult male. Similar to *A. linaria*, but larger and with a very much larger bill. Total length 5 inches, culmen 0·5, wing 2·9, tail 2·2, tarsus 0·5.

The changes of plumage and the differences in the colour of the sexes are the same as in the Mealy Redpoll.

Professor Newton suggests that the lengthened bill which charac-

terizes this race may be due to the food on which the bird subsists at certain seasons of the year.

Hab. Northern Europe from Scandinavia to Eastern Siberia. Said to occur in North America also.

a. ♂ ad. sk.	Norway, March 1882 (*R. Collett*). (Wing 3·1.)	Christiania Museum [P.].
b, c. ♂ ad. sk.	Finmark, July 11 (*R. C.*). (Wings 3·0–3·1.)	Christiania Museum [P.].
d. ♂ ad. sk.	Gardsjo, Sweden, June 24 (*H. Wheelwright*). (Wing 2·9.)	Gould Coll.
e. ♀ ad. sk.	Gardsjo, Nov. 20, 1862 (*H. W.*). (Wing 3·2.)	Gould Coll.
f. ♀ ad. sk.	Sweden (*H. W.*). (Wing 2·85.)	Gould Coll.
g. ♂ ad. sk.	Norwich, Norfolk, January. (Wing 3·0.)	Gould Coll.
h. Ad. sk.	Norwich, January. (Wing 2·9.)	Gould Coll.

Subsp. *β.* Acanthis rostrata.

Linaria lanceolata, *Selys-Longch. MSS.*
Acanthis grœnlandica, *Bp. Rev. et Mag. de Zool.* 1857, p. 55.
Ægiothus rostratus, *Coues, Proc. Philad. Acad.* 1861, p. 378.
Linota hornemanni (*nec Holboell*), *Gray, Hand-l. B.* ii. p. 110, no. 7654 (1870).
Acanthis linaria γ. lanceolata, *Dubois, Consp. Av. Europe*, p. 18 (1871).
Ægiothus linarius holboelli, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 493 (1874, pt.); *Brewster, Bull. Nutt. Orn. Club*, vii. p. 95 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 353 (1884).
Acanthis linaria rostrata, *Stejneger, Auk*, i. p. 153 (1884); *A. O. U. Check-list N. Amer. B.* p. 260 (1886).

Adult male. Similar to the large *A. holboelli* of Northern Europe, and only distinguishable by the coarser striping of the underparts, and by the stouter and more obtuse bill. Total length 5·4 inches, culmen 0·4, wing 3·2, tail 2·25, tarsus 0·65.

Adult female. Similar to the male, but lacks the red breast. Total length 5·4 inches, culmen 0·4, wing 3, tail 2·2, tarsus 0·55.

Young birds differ from the adults in the same way as with the common Mealy Redpoll.

Hab. Greenland and North-eastern America, wintering to the southward.

a. ♂ ad. sk.	Greenland, April (*Holboell*). (Wing 3·2.)	Gould Coll.
b. ♂ ad. sk.	Greenland, April (*Holboell*). (Wing 3·3.)	Salvin-Godman Coll.
c. ♀ ad. sk.	Greenland (*Holboell*). (Wing 2·9.)	Salvin-Godman Coll.
d. ♂ ad. sk.	Greenland. (Wing 3·1.)	Governor Holboell [C.].
e. ♀ ad. sk.	Lichtenfels, Greenland, June 30, 1874 (*Starick*). (Wing 3.)	R. B. Sharpe, Esq. [P.].
f, g. Juv. sk.	Lichtenfels, Sept. 1873 (*Starick*).	R. B. Sharpe, Esq. [P.].
h. ♂ ad. sk.	Chicago, Illinois, Nov. 2, 1873 (*H. K. Coale*). (Wing 3·3.)	R. B. Sharpe, Esq. [P.].

Subsp. γ. Acanthis rufescens.

The Redpolls, cock and hen, *Albin, N. H. Birds,* iii. p. 70, pl. 75 (1740).
Le petite Linotte ou Le Cabaret, *Briss. Orn.* iii. p. 142 (1760).
? Le Cabaret *, *Daubent. Pl. Enl.* iv. pl. 485. fig. 2.
? Fringilla cabaret, *P. L. S. Müll. Syst. Nat.,* Anhang, p. 165 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 255.
Lesser Redpole, *Lath. Gen. Syn.* ii. pt. 1, p. 305 (1783).
? Fringilla minima, *Bodd. Tabl. Pl. Enl.* p. 28 (1783).
Linaria rufescens, *Vieill. Mem. R. Accad. Torino,* xxiii. *Sc. Fis.* p. 202 (1816); *Roux, Orn. Prov.* pl. 100 (1825); *Gray, Hand-l. B.* ii. p. 109, no. 7650 (1870); *Fallon, Ois. Belg.* p. 105, note (1875).
Linaria minor, *Leach, Syst. Cat. Mamm. & B. Brit. Mus.* p. 15 (1816); *Selby, Brit. B.* p. 320 (1833); *Gould, B. Eur.* iii. pl. 194 (1837); *Macgill. Brit. B.* i. p. 383 (1837); *Thomps. B. Irel.* p. 270 (1849).
Linota linaria (*nec L.*), *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *Yarr. Brit. B.* i. p. 514 (1843).
Fringilla linaria (*nec L.*), *Schl. Rev. Crit.* p. lxiii (1844); *Gray, Gen. B.* ii. p. 372 (1849); *Hewits. Eggs Brit. B.* p. 201, pl. 51. fig. 2 (1856); *Gray, List Brit. B.* p. 98 (1863); *More, Ibis,* 1865, p. 129; *Keulem. Onze Vogels,* ii. pl. 43 (1873).
Acanthis linaria (*nec L.*), *Blyth, Cat. B. Mus. As. Soc.* p. 125 (1849); *Tschusi, J. f. O.* 1872, p. 132.
Acanthis rufescens, *Bp. & Schl. Monogr. Loxiens,* pl. 54 (1850); *Bp. Consp.* i. p. 540 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 139 (1859).
Ægiothus rufescens, *Cab. Mus. Hein.* Th. i. p. 161 (1850); *Coues, Proc. Philad. Acad.* 1861, p. 381; *Gould, B. Gt. Br.* iii. pl. 52; *Giglioli, Ibis,* 1881, p. 203; *id. Avif. Ital.* p. 37 (1886); *Salvad. Elench. Ucc. Ital.* p. 178 (1887).
Linacanthis rufescens, *Des Murs, Encycl. d'Hist. Nat.* v. p. 304 (1855–58, *teste Degl. & Gerbe*).
Linota rufescens, *Drake, Ibis,* 1867, p. 427; *Harting, Handb. Brit. B.* p. 28 (1872); *Irby, Ibis,* 1873, p. 97; *id. B. Gibr.* p. 121 (1875); *Newton, ed. Yarr. Brit. B.* ii. p. 146 (1876); *Dresser, B. Eur.* iv. p. 47, pl. 188 (1877); *Salvin, Cat. Strickl. Coll.* p. 206 (1882); *B. O. U. List Brit. B.* p. 54 (1882).
Linaria minima, *Doderl. Avif. Sicil.* p. 85 (1869).
Ægiothus cabaret, *Salvad. Faun. Ital., Ucc.* p. 157 (1871).
Fringilla rufescens, *Tschusi, J. f. O.* 1876, p. 331; *Seebohm, Hist. Brit. B.* ii. p. 116 (1884).
Acanthis linaria cabaret, *Stejneger, Auk,* i. p. 153 (1884).
Acanthis cabaret, *Stejneger, Auk,* iv. p. 144 (1887).

Adult male. Similar to *A. linaria*, but smaller, and of a more reddish colour, the lower back with only a slight admixture of white; bill yellow, with the tip blackish; legs and feet blackish; iris brown. Total length 4·5 inches, culmen 0·35, wing 2·7, tail 1·95, tarsus 0·55.

* This figure is unhesitatingly accepted by most ornithologists as referring to the Lesser Redpoll, but it may have been taken from a Mealy Redpoll; and it would be unwise to revive such a specific name as *cabaret* to replace the better-known one of *rufescens*, when such a change depends on no better foundation than Daubenton's unsatisfactory figure.

Adult female. Differs from the male in wanting the red on the breast and rump. Total length 4·5 inches, culmen 0·35, wing 2·7, tail 1·9, tarsus 0·5.

The *adult male in winter* is lighter than in summer, by reason of the light edges to the feathers, which wear off in the summer, when the plumage becomes very dusky, and almost blackish above.

Young. Differs from the adults exactly in the same way as in *A. linaria*.

Hab. Western Europe, breeding in the British Islands, and probably locally in the mountains of South-western Europe, wintering in most parts to the southward of its breeding-range.

a, b. ♂ ♀ ad. sk.	Bath.	Montagu Coll.
c, d. ♂ ♀ ad. sk.	Southwell, Nottinghamshire, Oct. 1, 1884. (Wing 2·7.)	Rev. W. Becher [P.].
e. ♂ ad. sk.	Loughborough, Leicestershire, May. (Wing 2·7.)	Gould Coll.
f, g. ♂ ♀ ad.; *h, i, k.* Pull. st.	Leicestershire.	Theodore Walker, Esq. [P.].
l, m. ♂ ♀ ad. st.	Cambridgeshire.	Mr. J. Baker [C.].
n. ♂ imm. sk.	Cambridgeshire (*J. Baker*). (Wing 2·65.)	Salvin-Godman Coll.
o. ♀ ad. sk.	Cambridge (*O. S.*). (Wing 2·65.)	Salvin-Godman Coll.
p, q. ♂ ♀ ad. st.	Norfolk, June.	Lord Walsingham [P.].
r. ♂ ad. sk.	Norfolk, June. (Wing 2·75.)	Lord Walsingham [P.].
s, t. ♂ ad. st.	Cookham, Berks.	Mr. W. Briggs [P.].
u. ♂ ad. sk.	Cookham, Feb. 1872. (Wing 2·75.)	R. B. Sharpe, Esq. [P.].
v, w, x. ♀ ad. sk.	Cookham, Feb. 1879. (Wings 2·65–2·7.)	R. B. Sharpe, Esq. [P.].
y. ♂ ad. sk.	Cookham, Dec. (Wing 2·65.)	R. B. Sharpe, Esq. [P.].
z, a'. ♂ ♀ ad. sk.	Cookham, Dec. (Wings 2·65–2·7.)	R. B. Sharpe, Esq. [P.].
b'. ♂ ad. sk.	Near London. (Wing 2·75.)	Gould Coll.
c'. ♂ ad. sk.	Kingsbury, Middlesex, Oct. (Wing 2·7.)	J. E. Harting, Esq. [P.].
d'. ♂ ad. st.	Kingsbury.	J. E. Harting, Esq. [P.].
e'. ♂ ad. sk.	Hampstead. (Wing 2·75.)	J. E. Harting, Esq. [P.].
f'. ♀ ad. sk.	Hampstead, April 20 (*R. B. S.*). (Wing 2·65.)	Hume Coll.
g'. ♂ ad. sk.	Hampstead, Sept. 30 (*R. B. S.*). (Wing 2·8.)	Hume Coll.
h', i'. ♂ ad. sk.	Hanwell, Middlesex, Nov. (Wing 2·7.)	R. B. Sharpe, Esq. [P.].
k'–p'. ♀ ad. sk.	Hanwell, Nov. (Wings 2·7–2·75.)	R. B. Sharpe, Esq. [P.].
q'–u'. ♂ imm. sk.	Hanwell, Nov. (Wings 2·7–2·85.)	R. B. Sharpe, Esq. [P.].
v'. ♀ ad. sk.	Sydenham, May. (Wing 2·65.)	Hume Coll.

w', *x'*. ♂ ad. st.	Brighton, Sussex, April.	R. B. Sharpe, Esq. [P.].
y', *z'*, *a*. ♂ ad. sk.	Brighton, Oct. 16, 1883. (Wings 2·7–2·85.)	R. B. Sharpe, Esq. [P.].
β-*θ*. ♀ ad. sk.	Brighton, Oct. (Wings 2·6–2·75.)	R. B. Sharpe, Esq. [P.].
ι, *κ*, λ. Ad. sk.	Brighton, Nov. (Wings 2·65–2·8.)	R. B. Sharpe, Esq. [P.].
μ, *ν*, *ξ*. ♂; *ο*, *π*. ♀ ad. st.	Brighton, Nov. 1883.	R. B. Sharpe, Esq. [P.].
ρ, *σ*. ♂ ad. sk.	Axmouth, Devon, Oct. 28. (Wings 2·75–2·85.)	R. B. Sharpe, Esq. [P.].
τ, *υ*, *φ*. ♀ ad. sk.	Axmouth, Oct. 28. (Wings 2·6–2·7.)	R. B. Sharpe, Esq. [P.].
χ. ♂ ad. sk.	Belgium, April (*Du Bus*).	Gould Coll.
ψ. ♂ ad. sk.	Belgium, April. (Wing 2·6.)	Brussels Museum [P.].
ω, *a'*. Ad. sk.	Nice, Nov. 1886. (Wings 2·7–2·85.)	Prof. H. H. Giglioli [P.].
β'. Sternum.	England.	J. Ingall, Esq. [P.].
γ'. Skeleton.	England.	Purchased.

5. Acanthis exilipes.

Linaria rufescens ♂, *Roux, Orn. Prov.* pl. 99 (1825).

Fringilla borealis (*nec Vieill.*), *Audub. B. Amer.* pl. 400; *id. Orn. Biogr.* vi. p. 87 (1839).

Linaria borealis (*nec Vieill.*), *Audub. B. Amer.* iii. p. 120, pl. 178 (1841).

Acanthis linaria (*nec L.*), *Bp. & Schl. Monogr. Loxiens*, pl. 52 (1850).

Fringilla linaria (*nec L.*), ♂, *Schl. Vog. Nederl* pl. 171 (1854).

Fringilla linaria, var. canescens, *Schrenck, Reis. Amurl.* p. 296 (1859).

Cannabina canescens (*nec Gould*), *Swinh. Ibis*, 1861, p. 355.

Fringilla canescens (*nec Gould*), *Sommerf. Œfv. K. Vet.-Akad. Förh. Stockh.* 1861, p. 81.

Ægiothus exilipes, *Coues, Proc. Philad. Acad.* 1861, p. 385; *Elliot, New and Unfig. B. N. Amer.* pl. 8 (1867); *Coues, Key N. Amer. B.* 2nd ed. p. 353 (1884).

Ægiothus canescens (*nec Gould*), *Ross, Edinb. Phil. Journ.* 1861, p. 163; *Blakist. Ibis*, 1863, p. 71; *David & Oust. Ois. Chine*, p. 336 (1877).

Acanthis canescens (*nec Gould*), *Dybowski & Parvex, J. f. O.* 1868, p. 335; *Tacz. J. f. O.* 1873, p. 92, 1874, p. 335; *id. Bull. Soc. Zool. France*, i. p. 180 (1876); *Dybowski, op. cit.* viii. p. 366 (1883).

Linaria exilipes, *Gray, Hand-l. B.* ii. p. 110, no. 7651 (1870).

Ægiothus borealis (*nec V.*), *Swinh. P. Z. S.* 1871, p. 386.

Ægiothus linaria, var. exilipes, *Coues, Key N. Amer. B.* p. 131 (1872).

Ægiothus canescens exilipes, *Ridgw. Ann. Lyc. N. Y.* x. p. 372 (1874); *Bean, Proc. U. S. Nat. Mus.* v. p. 149 (1882); *Nelson, Cruise 'Corwin,'* p. 67 (1883); *Murdoch, Exped. Pt. Barrow*, p. 105 (1885).

Ægiothus canescens, var. exilipes, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 493 (1874).

Linota canescens (*nec Gould*), *Seebohm & Harvie Brown, Ibis*, 1876, p. 116.

Linota exilipes, *Newton, Zool.* 1877, p. 6; *Brooks, Ibis*, 1885, p. 382.
Linaria sibirica, *Homeyer, J. f. O.* 1879, p. 185 (*ex Severtz. MSS.*).
Linaria pallescens, *Homeyer, J. f. O.* 1880, p. 156.
Linota linaria (*nec L.*), *Blakist. & Pryer, B. Japan*, p. 174 (1882).
Linota sibirica, *Homeyer & Tancré, MT. Orn. Ver. Wien*, 1883, p. 89.
Acanthis hornemanni exilipes, *Stejneger, Auk*, i. p. 152 (1884); *Turner, Proc. U. S. Nat. Mus.* viii. p. 239 (1885); *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 258 (1886); *A. O. U. Check-list N. Amer. B.* p. 260 (1886).

Adult male. General colour above hoary white, with blackish centres to the feathers, the lower back purer white; the rump uniform white with a strong rosy tinge; lesser wing-coverts brown; median coverts and greater coverts blackish, edged with brown and tipped with white, the latter more broadly; bastard-wing, primary-coverts, and quills blackish brown, edged with pale brown, hoary white on the quills, the secondaries more broadly edged; upper tail-coverts white, with brown centres; tail-feathers blackish brown, edged with white, both internally and externally; hinder crown like the back; forehead and sinciput deep crimson; feathers over the eye hoary white, forming an eyebrow; nasal plumes and a line across the base of the forehead hoary white; lores dusky blackish; feathers round the eye, ear-coverts, and cheeks whitish, the latter with a rosy tinge; chin black; throat and remainder of under surface white; the throat, fore neck, and breast suffused with pink; sides of body and flanks white, streaked with dusky blackish; thighs brown; under tail-coverts white, with concealed dusky bases; under wing-coverts and axillaries white, with dusky bases; quills below dusky, white along the inner edge: "bill orange-yellow, the culmen and tip of genys blackish; feet blackish brown; iris dark brown" (*Stejneger*). Total length 5 inches, culmen 0·4, wing 3, tail 2·3, tarsus 0·55.

The difference in colour of the sexes and the various changes are the same as the corresponding ones in the Mealy Redpoll.

Hab. From Northern Scandinavia across Siberia and throughout Northern America.

a. ♀ ad. sk.	Finmark, Feb. 11, 1880. (Wing 2·75.)	Christiania Museum.
b. ♀ ad. sk.	Vadso, Norway, June 25, 1874 (*H. S.*). (Wing 2·85.)	Henry Seebohm, Esq. [P.].
c. ♂ ad. sk.	Bodö, Norway (*F. Godman*). (Wing 3.)	Salvin-Godman Coll.
d. ♂ ad. sk.	Lapland (*H. Wheelwright*). (Wing 2·9.)	Gould Coll.
e. ♂ ad. sk.	Quickiock, Lapland, April 21, 1862 (*H. W.*). (Wing 3·05.)	Gould Coll.
f. ♀ ad. sk.	Moscow, Jan. 10. (Wing 2·9.)	Dr. Lenz [C.].
g, h. ♂ ad. sk.	Moscow, Feb. (Wings 2·85–2·95.)	Dr. Lenz [C.].
i, k. ♀ ad. sk.	Moscow, Feb. (Wing 2·8.)	Dr. Lenz [C.].
l, m. ♂ ad. sk.	Moscow, March. (Wings 2·9–3.)	Dr. Lenz [C.].

n. ♂ ad. sk.	Moscow, April. (Wing 2·95.)	Dr. Lenz [C.].
o, *p*. ♂ ♀ ad. sk.	Moscow, Nov. (Wings 2·85–2·95.)	Dr. Lenz [C.].
q. ♂ ad. sk.	Petchora River, May 9 (*J. A. H. B.*). (Wing 2·85.)	J. A. Harvie Brown, Esq. [P.].
r. ♂ ad. sk.	Ust Zylma, Petchora, April 22 (*H. S.*). (Wing 2·95.)	Henry Seebohm, Esq. [P.].
s. ♀ ad. sk.	Ust Zylma, May 6 (*H. S.*). (Wing 2 8.)	Henry Seebohm, Esq. [P.].
t. ♂ ad. sk.	Ust Zylma, May 6 (*H. S.*). (Wing 2·95)	Henry Seebohm, Esq. [P.].
u. ♀ ad. sk.	Umskia, Petchora River, April 23 (*H. S.*). (Wing 2·75.)	Henry Seebohm, Esq. [P.].
v. ♂ ad. sk.	Tachty, River Ob, July 12 (*Dr. O. Finsch*). (Wing 3.)	Geogr. Soc. Bremen.
w. ♂ ad. sk.	Nulato, Alaska (*W. H. Dall*). (Wing 3·05.)	Salvin-Godman Coll.
x. ♂ ad. sk.	Fort Yukon, Alaska, April 7 (*L. M. Turner*). (Wing 2·95.)	U. S. Nat. Mus. [P.].
y. ♂ ad. sk.	Red River (*Gunn*). (Wing 2·95.)	Sclater Coll.
z. Ad. sk.	Saskatchewan District (*Capt. Blakiston*). (Wing 2·9.)	R. B. Sharpe, Esq. [P.].
a', *b'*, *c'*. ♂ ad. sk.	Fort Simpson (*B. R. R.*). (Wings 2·95–3·05.)	B. R. Ross, Esq. [P.].
d'. ♂ ad. sk.	Fort Simpson (*B. R. Ross*). (Wing 3.)	Sclater Coll.
e'. Juv. sk.	Fort Simpson (*B. R. Ross*). (Wing 2·8.)	Sclater Coll.
f'. ♂ ad. sk.	Fort Chimo, Labrador, April 28 (*L. M. Turner*; Sm. no. 93947). (Wing 2·95.)	Sclater Coll.
g', *h'*. ♂ ♀ ad. sk.	Fort Chimo, May (*L. M. T.*; Sm. nos. 93967, 94005). (Wings 3 1–2·75.)	Sclater Coll.
i'. ♀ ad. sk.	Fort Chimo, May 1 (*L. M. T.*; Sm. no. 94034). (Wing 2·8.)	Salvin-Godman Coll.
k'. ♂ ad. sk.	Fort Chimo, July 2 (*L. M. T.*; Sm. no. 100014). (Wing 2·8.)	Salvin-Godman Coll.
l', *m'*. ♂ ♀ ad. sk.	Fort Chimo, Nov. (*L. M. T.*; Sm. nos. 93979–100646). (Wings 3·0–2·9.)	Salvin-Godman Coll.
n'. Juv. sk.	Fort Chimo (*L. M. T.*; Sm. no. 100646).	Salvin-Godman Coll.
o'. Ad. sk.	North America. (Wing 2·95.)	Hume Coll.

Subsp. *a*. Acanthis hornemanni.

Fringilla borealis (*nec V.*), *Temm. Man. d'Orn.* iii. p. 264 (1835); *Werner, Atlas, Granivores*, pl. 17; *Selys-Longch. Faune Belge*, p. 73 (1842).

Linota borealis, *Audub. B. Amer.* iii. p. 120 pl. 178 (1841).

Linota hornemanni, *Holboell, Naturl. Tidskr.* iv. p. 395 (1843); *Salvin, Cat. Strickl. Coll.* p. 206 (1882); *B. O. U. List Brit. B.* p. 54 (1883); *Brooks, Ibis*, 1885, p. 384.

Fringilla hornemanni, *Gray, Gen. B.* ii. p. 372 (1849) *Seebohm, Hist. Brit. B.* ii. p. 117 (1884).

Acanthis canescens (*nec Gould*), *Bp. & Schl. Monogr. Loxiens*, pl. 51 (1850); *Bp. Consp.* i. p. 541 (1850).
Ægiothus canescens (*nec Gould*), *Cab. Mus. Hein.* Th. i. p. 161 (1850); *Baird, B. N. Amer.* p. 429 (1858); *Coues, Proc. Philad. Acad.* 1861, p. 388; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 498 (1874).
Fringilla canescens, *Reinh. Ibis*, 1861, p. 7.
Linota linaria, pt., *Newton in Baring Gould's Iceland*, App. p. 409 (1863); *Dresser, B. Eur.* iv. p. 37, pl. 187 (1877).
Fringilla linaria (*nec L.*), *Newton, Ibis*, 1865, p. 102.
Ægiothus canescens, var. canescens, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 493 (1874).
Acanthis hornemanni, *Stejneger, Auk*, i. p. 152 (1884); *Turner, Proc. U.S. Nat. Mus.* viii. p. 239 (1885); *A. O. U. Check-list N. Amer. B.* p. 259 (1886).
Ægiothus hornemanni, *Coues, Key N. Amer. B.* 2nd ed. p. 49 (1884).
Acanthis hornemanni typica, *Brewster, Auk*, iv. p. 164 (1887).

Adult male. Similar to *A. exilipes*, but larger. Total length 5·3 inches, culmen 0·4, wing 3·4, tail 2·5, tarsus 0·65.

Adult female. Similar to the male, but rather smaller, and wanting the rosy colour on the breast and rump. Total length 5·3 inches, culmen 0·4, wing 2·2, tail 2·3, tarsus 0·6.

There is very little difference apparently between the summer and winter plumage of this large Redpoll, the development of the rosy breast being less pronounced than in any of the other races of *A. linaria*.

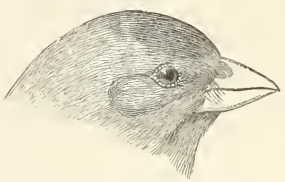
Hab. Iceland, Greenland, and Eastern North America.

a. ♂ ad. sk.	Arctic America. (Wing 3·3.)	Dr. Rae [P.].
b. ♂ ad. sk.	Forko, Labrador, Dec. 25, 1882 (*L. M. Turner*; Sm. no. 93853). (Wing 3·35.)	Salvin-Godman Coll.
c. ♀ ad. sk.	Fort Chimo, Dec. 5, 1882 (*L. M. T.*; Sm. no. 93864). (Wing 3·15.)	Salvin-Godman Coll.
d. ♂ ad. sk.	Fort Chimo, Jan. 14, 1883 (*L. M. T.*; Sm. no. 93817). (Wing 3·4.)	Salvin-Godman Coll.
e. ♂ ad. sk.	Fort Chimo, May 5, 1880 (*L. M. T.*; Sm. no. 93823). (Wing 3·4.)	Sclater Coll.
f. ♀ ad. sk.	Forko, Dec. 22, 1882 (*L. M. T.*; Sm. no. 93840). (Wing 3·25.)	Sclater Coll.
g. ♂ ad. sk.	Whitefish Lake, Nov. 21, 1882 (*L. M. T.*; Sm. no. 93930). (Wing 3·2.)	Sclater Coll.
h. Ad. sk.	Greenland. (Wing 3·6.)	Gould Coll.
i. Ad. sk.	Greenland. (Wing 3·3.)	Governor Holboell [C.].

32. MONTIFRINGILLA.

	Type.
Montifringilla, *Brehm, Isis*, 1828, p. 1277 (1828)	M. nivalis.
Chionospiza, *Kaup, Natürl. Syst.* p. 139 (1829)	M. nivalis.
Leucosticte, *Swains. Faun. Bor.-Amer., Birds*, p. 493 (1831)	M. tephrocotis.
Orites, *Keys. u. Blas. Wirb. Eur.* p. xlii (1840, *nec Mœhr.*)	M. nivalis.
Geospiza, *Gloger, Handb.* p. 254 (1842, *nec Gould*) ..	M. nivalis.

	Type.
Fringillauda, *Hodgs. in Gray's Zool. Misc.* p. 84 (1844)	M. nemoricola.
Pyrgilauda, *J. Verr. N. Arch. Mus.* vi. *Bull.* p. 40 (1870)	M. davidiana.
Hypolia, *Ridgw. Bull. U.S. Geol. Surv.* i. p. 67, note (1875)	M. arctoa.
Onychospiza, *Prjevalski, in Rowley's Orn. Misc.* ii. p. 290 (1877)	M. mandellii.
Plectrofringilla, *Bogd. B. Cauc.* p. 67 (1879)	M. alpicola.



Head of *Montifringilla griseinucha*.

Range. Mountains of Southern Europe and of Central and North-eastern Asia, including also the Himalayas and the mountains of Thibet. Western North America from Alaska and the neighbouring islands to Colorado and New Mexico.

Key to the Species.

a. Outer tail-feather entirely or for the most part white.
  a'. Lores ashy or brown, not forming a black line through the eye.
    a''. Throat black; bill black.
      a'''. Head and neck ashy grey, contrasting with the brown back; lower and median coverts white ..... *nivalis* æstiv., p. 260.
      b'''. Head and neck uniform brown ..... *alpicola* æstiv., p. 261.
    b''. Throat white, or with concealed blackish bases (winter plumage, when the bill is yellow).
      c'''. Head ashy grey; back brown ..... *nivalis* hiem., p. 260.
      d'''. Head brown like the back ..... *alpicola* hiem., p. 261.
        a^1. Lesser and median wing-coverts white.
        b^1. Lesser and median wing-coverts brown, the latter with whitish tips sometimes ..... *adamsi*, p. 261.
  b'. Lores black, forming a mask in front of the eye.
    c''. Throat white.
      e'''. No rufous on the sides of the neck; outer tail-feather entirely white; no black moustachial streak ..... *mandellii*, p. 262.
      f'''. Sides of neck rufous; outer tail-feather with a broad band of brown at the tip; a black moustachial streak ..... *ruficollis*, p. 263.
    d''. Throat black.
      g'''. Black of throat not extending to the fore neck, forehead white, with a black streak in the centre ..... *blanfordi*, p. 264.

k'''. Black of throat extending on to fore neck; forehead black ..... *davidiana*, p. 265.

b. Outer tail-feather with no white on the inner web.

c'. With no rose-colour on the flanks.

e''. Head streaked with blackish centres like the back; no rose-colour or crimson on the rump.

i'''. Axillaries saffron-yellow ..... *nemoricola*, p. 268.

k'''. Axillaries ashy whitish ..... *sordida*, p. 266.

f'. Head uniform; rump-feathers edged with crimson or rose-colour..... *brandti*, p. 269.

d'. Flank-feathers edged with rose-colour.

g''. Upper tail-coverts hoary grey like the tail, and tipped with black; wing-coverts and quills also hoary grey, blackish at the ends *arctoa*, p. 272.

h''. Upper tail-coverts blackish like the tail and wings..... *giglioli*, p. 273.

i''. Upper tail-coverts tipped with rose like the rump; lesser wing-coverts rosy.

l'''. Ear-coverts brown.

*c*⁴. Hind neck pearly grey ..... *tephrocotis*, p. 273. / *atrata*, p. 274.

*d*⁴. Hind neck brown like the back .... *australis*, p. 275.

m'''. Ear-coverts pearly grey or dark grey.

*e*⁴. Forehead with a black patch; hind neck pearly grey ..... *griseinucha*, p. 275. / *littoralis*, p. 277.

*f*⁴. Forehead and crown grey; hind neck sandy buff..... *brunneinucha*, p. 278.

1. Montifringilla nivalis.

Le Pinçon de Neige ou la Niverolle, *Briss. Orn.* iii. p. 162, pl. 15. fig. 1 (1760).

Fringilla nivalis, *Linn. Syst. Nat.* i. p. 321 (1766); *Temm. Man. d'Orn.* i. p. 362 (1820); *Roux, Orn. Prov.* pl. 89 (1825); *Naum. Vög. Deutschl.* v. pl. 117 (1826); *Werner, Atlas, Granivores*, pl. 46 (1827); *Gould, B. Eur.* iii. pl. 189 (1837); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 178 (1840); *Gray, Gen. B.* ii. p. 372 (1849); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 136 (1859); *Borggr. Vogelf. Norddeutschl.* p. 77 (1869); *Gray, Hand-l. B.* ii. p. 85, no. 7251 (1870); *Irby, B. Gibr.* p. 119 (1875).

Fringilla saxatilis, *Koch, Syst. baier. Zool.* p. 216 (1816).

Plectrophanes fringilloides, *Boie, Isis*, 1822, p. 554.

Montifringilla nivalis, *Brehm, Isis*, 1828, p. 1277; *Bp. & Schl. Monogr. Loxiens*, p. 40, pl. 46 (1850): *Bp. Consp.* i. p. 538 (1850); *Tristr. Ibis*, 1863, p. 365; *Salvad. Ibis*, 1864, p. 129; *Giglioli, Ibis*, 1865, p. 57; *Tristr. Ibis*, 1866, p. 288, 1868, p. 208; *Degl. et Gerbe, Orn. Eur.* i. p. 277 (1867); *Bettoni, Ucc. Nidif. Lomb.* pl. 110 (c. 1869); *Doderl. Avif. Sicil.* p. 81 (1869); *Fritsch, Vög. Eur.* pl. 24. fig. 13 (c. 1870); *Salvad. Faun. Ital. Ucc.* p. 150 (1871); *Dresser, B. Eur.* iii. p. 617, pl. 181 (1876); *Danf. Ibis*, 1878, p. 23; *Giglioli, Ibis*, 1881, p. 203; *Tristr. Ibis*, 1882, p. 407; *Seeb. Ibis*, 1883, p. 10; *Saunders, Ibis*, 1884, p. 376; *Tristr. Faun. & Flor. Palest.* p. 69 (1884); *Gigl. Avif. Ital.* p. 22 (1886); *Wilson, Ibis*, 1887, p. 142; *Salvad. Elench. Ucc. Ital.* p. 171 (1887).

Montifringilla glacialis, *Brehm, Isis*, 1828, p. 1277; *id. Vogelf.* p. 101 (1855).
Chionospiza nivalis, *Kaup, Natürl. Syst.* p. 134 (1829).
Fringilla (Orites) nivalis, *Keys. & Blas. Wirb. Eur.* p. xlii (1840).
Leucosticte nivalis, *DesMurs, Encycl. d'Hist. Nat.* part 6, p. 297 (*teste Degland et Gerbe*).

Adult. General colour above brown, with lighter brown edges to the feathers of the mantle and upper back; rump uniform darker brown; all the wing-coverts white; bastard-wing black; primary-coverts black, white at the base; quills black, edged with pale brown, the inner primaries tipped with whitish, the secondaries entirely white, the innermost brown with paler brown edges; upper tail-coverts black with brown edges, the outer ones white or externally white; centre tail-feathers blackish with brown edges, the next two with more or less white on both webs, the remainder white, with a blackish spot at the end, diminishing in extent towards the outermost feather; crown of head greyer than the back, the hind neck and sides of neck ashy grey; base of forehead whitish; lores ashy white; eyelid whitish; ear-coverts ashy grey, whiter on the cheeks; under surface of body creamy white, with a black patch on the throat; breast and abdomen whiter; sides of body and flanks with a pale brownish tinge; thighs pale ashy brown; under tail-coverts white, the long ones with a brown spot at the end; under wing-coverts and axillaries white; quills below dusky, white on the inner secondaries. Total length 6·8 inches, culmen 0·5, wing 4·4, tail 2·65, tarsus 0·8.

The *winter plumage* is very similar to that of summer, but the bill is yellow and the black throat is hidden by whitish margins to the feathers. Slight remains of brown margins to the lesser wing-coverts are discernible in some specimens killed in winter, but are probably indicative of immaturity. I have not seen a young bird, and cannot say if the primary-coverts are entirely blackish, as in the allied species, but this is most probably the case.

There is no difference in size or colouring of the sexes, both males and females having the wing from 4·65 to 4·85 and 4·9 inches.

Hab. Mountains of Southern Europe eastwards to Palestine.

a. Ad. st.	Europe.	Purchased.
b. Ad. sk.	S. Europe.	Hume Coll.
c. Ad. sk.	S. Europe (*H. Saunders*).	Gould Coll.
d. Ad. sk.	S. Europe.	Gould Coll.
e. Ad. sk.	Luchon, Pyrenees.	Salvin-Godman Coll.
f. ♀ ad. sk.	Switzerland.	Hume Coll.
g, h. ♂ ♀ ad. sk.	Italian Alps, Dec. 1882.	Prof. Giglioli [P.].

2. Montifringilla alpicola.

Passer alpicola, *Pall. Zoogr. Rosso-Asiat.* ii. p. 20 (1811).
Montifringilla leucura, *Bp. C. R.* xli. p. 657 (1855, *ex Gould MSS.*).
Montifringilla nivalis (*nec L.*), *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 491 (1856); *Severtz. Turkest. Jevotn.* p. 75 (1873).
Fringilla alpicola, *Gray, Hand-l. B.* ii. p. 85, no. 7252 (1870).
Montifringilla fringilloides, *Dresser, Ibis*, 1875, p. 242.

Montifringilla alpicola, *Blanf. East. Persia*, ii. p. 248 (1876); *Seebohm, Ibis*, 1883, p. 10; *Severtz. t. c.* p. 60; *Radde, Orn. Cauc.* p. 171 pl. viii. (1884).
Plectrofringilla alpicola, *Bogd. B. Cauc.* p. 67 (1879).

Adult male. Similar to *M. nivalis* and having a similar black throat, but with the head brown like the back and not ashy grey. The lesser wing-coverts white like the median and greater coverts. Total length 6·5 inches, culmen 0·6, wing 4·65, tail 2·75, tarsus 0·9.

Although rather a smaller bird than *M. nivalis*, the bill is perceptibly longer and stouter. The *young* bird (*mus. H. Seebohm*) is much more tawny brown than the adult, the white of the quills and tail-feathers being externally washed with tawny, the secondaries and outer tail-feathers with dusky-brown markings at the ends of the white feathers. The lesser wing-coverts are blackish, tipped with white spots, and the median coverts have dusky blackish bases; the primary-coverts are uniform dusky blackish. All the latter characters show an affinity to *M. adamsi*, from which, however, even such a young bird as is here described can be recognized by the greater amount of white on the secondaries.

Hab. From the Caucasus to the mountains of Persia, Turkestan, and Afghanistan.

a. Ad. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll. (Type of *M. leucura*.)
b. ♂ ad. sk.	Mazendaram, Elburz Mountains, Persia, Feb. 1870.	Sir O. St. John [C.].
c, *d*. Ad. sk.	Persia.	Purchased.
e. Ad. sk.	Afghanistan (*Griffith*).	India Museum.
f. Sternum of spec. *a*.	Persia.	Sir O. St. John [C.].

3. Montifringilla adamsi.

Montifringilla adamsi. *Moore, MSS.*; *Adams, P. Z. S.* 1858, p. 482, 1859, p. 178, pl. 156; *Gould, B. Asia*, v. pl. 1 (1867); *Blyth, Ibis*, 1867, p. 43; *Pelz. Ibis*, 1868, p. 319; *Walden, Ibis*, 1869, p. 213; *Hume & Henders. Lahore to Yark.* p. 262 (1873); *Hume, Nests & Eggs Ind. B.* p. 473 (1873); *Stoliczka, Str. F.* 1874, p. 463, 1875, p. 220; *Scully, Str. F.* 1876, p. 172; *Prjevalski in Rowley's Orn. Misc.* ii. p. 289 (1877); *David & Oust. Ois. Chine*, p. 547 (1877); *Hume, Str. F.* 1879, p. 108; *Severtz. Ibis*, 1883, pp. 60, 81; *Prjev. Ibis*, 1884, p. 244.
Fringilla adamsi, *Gray, Hand-l. B.* ii. p. 85, no. 7253 (1870).

Adult male in summer plumage. General colour above nearly uniform brown, with indistinct centres of darker brown on the mantle and back; lesser wing-coverts brown; median coverts brown, tipped with white; greater coverts white, brown at the base, the inner ones light brown like the back; bastard-wing blackish brown; primary-coverts white, with blackish-brown tips; quills blackish, edged with lighter brown; the secondaries white at the ends, increasing in extent towards the innermost, which are pale brown like the back; upper tail-coverts black, the outer ones white or externally white; centre tail-feathers blackish, edged with brown; the remainder entirely white with a blackish spot at the ends; crown

of head a trifle greyer than the back; lores ashy whitish; ear-coverts pale brown; cheeks and under surface of body creamy white; the throat black, concealed by whitish edges to the feathers; sides of body and flanks a little browner; thighs light brown; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, white at the ends of the secondaries: "bill black in summer, yellow, dusky on culmen, and brown at tip in winter; legs, feet, and claws black; iris brown" (*G. Henderson*). Total length 6 inches, culmen 0·55, wing 4·5, tail 2·6, tarsus 0·8.

In *winter plumage* the bill is yellow and the whole tone of colour is browner, the quills and tail-feathers broadly edged with sandy brown. The back is slightly mottled with darker centres to the feathers.

Young birds resemble the winter plumage of the adults, but have a more decided tawny tinge on the back, wings, and tail, the white feathers of the latter being washed externally with tawny buff; the primary-coverts have broad blackish tips and bases, the white being restricted; the white-tipped secondaries are broadly washed with tawny buff.

Hab. Mountains of Ladak and Upper Cashmere to Kulu, Thibet, and Kashgar.

a. Ad. sk.	Ladak (*Dr. A. L. Adams*).	India Museum. (Type of species.)
b, c. ♂ imm. sk.	Kurbu, Ladak, Oct. 28, 1870 (*Dr. G. Henderson*).	Hume Coll.
d, e. ♂ juv. sk.	Shergol, Oct. 21, 1870 (*G. H.*).	Hume Coll.
f. ♂ ad. sk.	Fota-là Pass, June 27, 1870 (*G. H.*).	Hume Coll.
g. ♂ ad. sk.	Dizar, Gilgit, June 27, 1874 (*J. Biddulph*).	Hume Coll.
h. Ad. sk.	Kulu.	Gould Coll.
i. Ad. sk.	Kulu.	India Museum.
k. Ad. sk.	Thibet, March 1875 (*L. Mandelli*).	Hume Coll.
l. Ad. sk.	Thibet, June 1876 (*L. Mandelli*).	Hume Coll.
m. Ad.; *n.* Juv. sk.	Thibet, July 1876 (*L. Mandelli*).	Hume Coll.
o. Ad. sk.	Thibet, August 1876 (*L. Mandelli*).	Hume Coll.
p. Juv. sk.	Thibet, Sept. 1874 (*L. Mandelli*).	Hume Coll.

4. Montifringilla mandellii.

Montifringilla mandellii, *Hume, Str. F.* 1876, p. 488; *id. Str. F.* 1879, p. 108.

Onychospiza taczanowskii, *Pyjevalski in Rowley's Orn. Misc.* ii. p. 290, pl. iii. (1877); *David & Oust. Ois. Chine*, p. 548 (1877).

Adult female. General colour above light ashy brown, streaked with blackish brown, the feathers being externally ashy; feathers of the lower back tipped with white like the rump, which is satiny white; wing-coverts dusky brown, broadly edged with white, the innermost greater coverts rather greyer and with broad white tips; bastard-wing, primary-coverts, and quills blackish, fringed with ashy, the secondaries more broadly edged with brown, the innermost greyer, with broad white tips like the inner greater coverts; the first primary white externally; upper tail-coverts light brown; tail-

feathers dark brown, the centre ones edged and tipped with sandy buff, all the others tipped with white, increasing in extent towards the outer feather, which is for the most part white; crown of head light ashy brown, the hind neck ashy grey, forming an indistinct collar; lores black, surmounted by a distinct frontal band and eyebrow of ashy white; eyelid white; ear-coverts pale ashy; cheeks and throat white; sides of neck pale ashy mixed with white; fore neck and remainder of under surface light pearly grey, whiter on the lower breast and abdomen; sides of body and flanks slightly tinged with brown, the latter rather distinctly streaked with blackish brown; thighs ashy white; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, white along the inner edge: "culmen lead-colour, tipped with black; tarsus, toes, and claws black; iris light brown" (*Prjevalski*). Total length 6·8 inches, culmen 0·65, wing 4·1, tail 2·45, tarsus 0·95.

Hab. Thibet and Kansu.

a, b. Ad. sk.	Thibet, Sept. 1874 (*L. Mandelli*).	Hume Coll. (Types of species.)
c. Ad. sk.	Thibet, Sept. 1878 (*L. Mandelli*).	Hume Coll.
d. Ad. sk.	Thibet, Oct. 1878 (*L. Mandelli*).	Hume Coll.
e. ♀ ad. sk.	Kansu, October.	General Prjevalski [C.].

5. Montifringilla ruficollis.

Montifringilla ruficollis, *Blanf. Pr. A. S. Beng.* 1871, p. 227; *Gould, B. Asia*, v. pl. 5 (1875); *Hume, Str. F.* 1876, p. 486, 1879, p. 108.
Pyrgilauda ruficollis, *Prjev. in Rowley's Orn. Misc.* ii. p. 292, pl. liv. fig. 2 (1877); *David & Oust. Ois. Chine*, p. 548 (1877).

Adult male (type of species). General colour above light sandy brown, streaked with blackish on the mantle and back; the lower back and rump uniform sandy rufous; scapulars like the back, but rather greyer externally; lesser wing-coverts ashy whitish; median coverts white with black bases; greater coverts brown, edged with hoary white; bastard-wing and primary-coverts blackish brown; quills dark brown, edged with pale ashy brown, broader on the inner secondaries, most of the quills white towards the base of the inner web, the first primary and some of the inner ones edged with white; upper tail-coverts and centre tail-feathers dark brown, externally paler brown, the remainder grey on the inner web, white on the outer, and subterminally also on the inner web, with a brown spot at the end of the feather, the grey increasing towards the centre of the tail; crown of head light brown, uniform, and a little more ashy on the occiput, nape, and hind neck; forehead ashy whitish, extending backwards into an eyebrow; lores black, as also a streak below the eye along the upper part of the ear-coverts; ear-coverts, sides of hinder crown, and sides of neck tawny rufous; cheeks and feathers below the eye pure white; throat white, separated from the cheeks by a malar line of dusky blackish; fore neck and rest of under surface of body white, washed on the breast with creamy buff; sides of body and flanks dark tawny buff; thighs and under tail-coverts white, the long feathers washed with buff at the ends;

under wing-coverts and axillaries white; quills below dusky, white at the base of the inner edge. Total length 6 inches, culmen 0·4, wing 3·7, tail 2·25, tarsus 0·8.

Adult female. Similar to the male but duller in colour, the tawny sides of the neck and the white forehead not so strongly pronounced. Total length 5·5 inches, culmen 0·45, wing 3·55, tail 1·75, tarsus 0·8.

In *summer* the plumage becomes much worn and abraded, and the white on the wing-coverts is less conspicuous.

Young birds are much browner than the adults and have the crown uniform brown, with a reddish-brown eyebrow and a tinge of the same colour on the sides of the neck; the whole of the under surface is suffused with tawny buff, and the tail is edged with tawny brown.

Hab. Sikhim and Thibet to Kansu and Kokonoor.

a. Ad. sk.	Kangra Lama Pass, Sikhim, Oct. 5, 1870 (*H. J. Elwes*).	Hume Coll.
b. ♂ ad. sk.	Kangra Lama Pass, Sikhim, Oct. 5, 1870.	W. T. Blanford, Esq. [P.]. (Type of species.)
c. ♀ ad. sk.	Phalung, Sikkim, Oct. 7.	W. T. Blanford, Esq. [P.].
d, e, f. Ad.; *g–k.* Juv. sk.	Thibet, Sept. 1874 (*L. Mandelli*).	Hume Coll.
l. Ad. sk.	Thibet, Oct. 1878 (*L. Mandelli*).	Hume Coll.
m, n. Ad. sk.	Thibet, June 1876 (*L. Mandelli*).	Hume Coll.
o. Juv. sk.	Thibet, July 1876 (*L. Mandelli*).	Hume Coll.
p. ♂ ad. sk.	Kokonoor, October.	General Prjevalski [P.].
q. ♀ ad. sk.	Kansu, October.	General Prjevalski [P.].

6. Montifringilla blanfordi. (Plate IV.)

Montifringilla blanfordi, *Hume, Str. F.* 1876, p. 487, 1879, p. 108.

Adult (type of species). General colour above uniform sandy brown, the upper tail-coverts resembling the back; wing-coverts like the back, with pale sandy-buff edges to the median and greater coverts; bastard-wing and primary-coverts black, fringed with ashy brown; quills blackish, externally edged with ashy brown, the inner secondaries more broadly margined and tipped with pale sandy, the inner primaries and secondaries white at the base of the inner web, the former also white externally, as well as the first primary; centre tail-feathers blackish, edged with white, the remainder having the white increasing externally and towards the ends, which are edged with sandy buff and have a large subterminal blackish spot; crown of head like the back; the occiput, nape, and hind neck more rufous, forming an indistinct collar, commencing behind the eye; forehead white, intersected by a black median streak; lores black, extending in a streak above the eye, and followed by a white eyebrow; eyelid black above, white below, like the ear-coverts and cheeks, which have a slight tinge of rufous like the sides of the neck; throat and under surface of body white; chin black; sides of

breast, sides of body, and flanks pale fawn-brown; thighs and under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, white along the inner edge. Total length 5·7 inches, culmen 0·5, wing 3·8, tail 2·25, tarsus 0·65.

The large series in the Hume Collection does not contain a single specimen with the sex marked, Mr. Mandelli having evidently distrusted his native collectors on this head. Many specimens want the black throat, and these may be the *adult females*.

Young birds are browner than the adults, and have the head dusky brown, with the lores and facial markings as well as the chin-spot dull ashy instead of black; there is less white at the base of the inner primaries.

The *winter plumage* is more sandy and lighter than the *summer plumage*, and the white forehead and sides of face are very clear.

Hab. Sikhim and Thibet.

a. Ad. sk.	Thibet, March 1875 (*L. Mandelli*).	Hume Coll.
b. Ad. sk.	Thibet, May 1876 (*L. Mandelli*).	Hume Coll.
c. Ad.; *d*. Juv. sk.	Thibet, July 1876 (*L. Mandelli*).	Hume Coll.
e, f. Juv. sk.	Thibet, Aug. 1876 (*L. Mandelli*).	Hume Coll.
g. Ad. sk.	Thibet, Sept. 1874 (*L. Mandelli*).	Hume Coll. (Type of species.)
h–m. Ad.; *n, o, p*. Juv. sk.	Thibet, Sept. 1874–1878 (*L. Mandelli*).	Hume Coll.
q. Ad.; *r*. Juv. sk.	Thibet, Oct. 1878 (*L. Mandelli*).	Hume Coll.
s, t, u. Ad.; *v*. Juv. sk.	Near Darjiling.	Hume Coll.

7. Montifringilla davidiana.

Passer ouratensis, *David, MSS.*; *Swinh. P. Z. S.* 1870, p. 430, 1871, p. 386.

Pyrgilauda davidiana, *J. Verr. N. Arch. Mus.* vi. *Bull.* p. 40 (1870), vii. p. 62, pl. i. fig. 2 (1871); *Prjevalski in Rowley's Orn. Misc.* ii. p. 292 (1877); *David & Oust. Ois. Chine*, p. 339 (1877).

Adult male. General colour above sandy brown, with blackish-brown centres to the feathers of the mantle and upper back, the rump rather more uniform; lesser wing-coverts ashy brown; median and greater coverts dusky brown, with sandy-buff edges; bastard-wing blackish brown, fringed with whitish; primary-coverts blackish brown, edged with white, the outer ones broadly; quills dusky brown, externally edged with pale brown, tipped with a white margin, the secondaries externally sandy brown, edged with whitish at the ends, the inner primaries white across both webs near the base, forming an oblique band; upper tail-coverts dusky brown, edged with ashy, the lateral ones sandy buff; centre tail-feathers dark brown, broadly edged with sandy buff, subterminally margined with white, the remainder blackish, with more or less white towards the base of the inner web; a broad subterminal bar of black across the end of the feathers, preceded by a broad white bar, the outer feather for the most part white, except a blackish patch in the middle of the inner web and a small subterminal black spot; crown of head uniform sandy brown; eyelid, sides of hinder crown, ear-

coverts, and hinder cheeks white, slightly washed with sandy buff; across the forehead a broad band of black; the lores, feathers below the eye, fore part of cheeks, throat, and centre of fore neck also black; sides of fore neck and remainder of under surface of body white; sides of body and flanks sandy buff; thighs sandy buff; under tail-coverts white; under wing-coverts and axillaries white; quills below ashy, white along the inner web: "bill white, the point brown, turning yellow in the dried skin; legs reddish grey, toes darker; iris reddish" (*David*). Total length 4·5 inches, culmen 0·4, wing 3·3, tail 1·65, tarsus 0·6. (*Mus. H. Seebohm.*)

Hab. Chinese Mongolia.

8. Montifringilla sordida.

? Propasser murrayi, *Blyth, J. A. S. Beng.* xxxii. p. 458 (1863); *Hume, Str. F.* 1876, p. 504, 1879, p. 108.

Fringillauda nemoricola (*nec Hodgs.*), *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 492 (1856); *Adams, P. Z. S.* 1859, p. 184; *Jerd. B. Ind.* ii. p. 414 (1863, pt.); *Pelz. Ibis*, 1868, p. 319; *Hume & Henders. Lahore to Yark.* p. 264 (1873).

Fringillauda sordida, *Stoliczka, J. A. S. Beng.* xxxvii. p. 63 (1868); *Hume, Str. F.* 1873, p. 41, 1879, p. 108; *Scully, Ibis*, 1881, p. 597; *Biddulph, t. c.* p. 88; *Homeyer & Taneré, MT. Orn. Ver. Wien*, 1883, p. 89.

Fringilla sordida, *Gray, Hand-l. B.* ii. p. 85, no. 7256 (1870).

Carpodacus murrayi, *Gray, t. c.* p. 102, no. 7520 (1870).

Passer pulverulentus, *Severtz. Turkest. Jevotn.* pp. 64, 116 (1873); *Dresser, Ibis*, 1875, p. 240; *Severtz. Str. F.* 1875, p. 424.

Fringillauda altaica, *Eversm.**, *Severtz. Ibis*, 1883, p. 60.

Adult male. General colour above brown, mottled with black centres to the feathers, the feathers of the mantle and back broadly edged with creamy white; lower back and rump ashy grey; lesser wing-coverts sandy brown with blackish centres; median coverts ashy grey, edged with yellowish buff and centred with black shaft-streaks; greater coverts dusky blackish, narrowly tipped with yellowish white and externally edged with light brown, the inner ones blackish externally near the base; bastard-wing blackish, edged with lighter brown; primary-coverts blackish, with ashy-grey bases and conspicuously edged with white along the outer web; quills blackish, edged with sandy brown, the inner secondaries with ochreous buff and conspicuously blackish at the base of the outer web, forming a similar pattern to the inner greater coverts; upper tail-coverts blackish, broadly tipped with white; tail-feathers dark brown, edged with sandy buff, paler towards the ends of the feathers and broader on the middle ones; crown of head like the back, sandy brown, mottled with black centres to the feathers; hind neck more uniform ashy brown; lores ashy; a narrow eyebrow of pale sandy buff, as well as the eyelid; ear-coverts and cheeks pale ashy brown, slightly streaked with dusky centres; throat and under surface of

* This name is quoted by Severtzoff (*l. c.*), but I have not been able to find where it was published. I have very little doubt that the oldest name of the present species is *M. murrayi* (Blyth); but, as Mr. Hume is a little uncertain on the subject, I have adopted the one by which it is best known to ornithologists.

body pale ashy brown, the feathers edged with greyish white on the lower breast and sides of body; breast rather more ashy, with some dusky-brown streaks on the sides of the upper part of it; abdomen whitish; thighs pale ashy; under tail-coverts white, mottled with dusky-blackish centres; under wing-coverts and axillaries ashy whitish, with dusky bases; quills below dusky, ashy along the inner edge: "upper mandible brown, except a spot at the base of the forehead, which is brownish fleshy; lower mandible brownish fleshy, the tip and sides brown; legs, feet, and claws blackish brown; iris cinnabar-red" (*W. Davison*). Total length 6 inches, culmen 0·5, wing 3·85, tail 2·5, tarsus 0·75.

Adult female. Scarcely different from the male, but has the grey of the rump washed with brown. Total length 6 inches, culmen 0·5, wing 3·75, tail 2·2, tarsus 0·75.

Young. Differs from the adults only in being much more rufous, the lower back and rump being more ashy, the wing-coverts tipped with fulvous; the head is dark rufous, mottled with blackish centres to the feathers; sides of face and under surface of body deep rufous, whitish in the centre of the abdomen.

The *young birds after their first moult* are like the adults, but have the head and ear-coverts uniform tawny rufous, and from this stage the full plumage is apparently gained by a direct moult, as several red-headed specimens exhibit traces of the approaching stripes on the head.

Dr. Stoliczka affirms that the adult female is the bird with the uniform crown; but Mr. Hume's collection contains several males in this stage of plumage, and also many in a state of transition from the uniform crown to the striped one of the adult.

Hab. From the Altai Mountains to Kashgar, Western Thibet, Afghanistan, and the North-western Himalayas as far as Kumaon.

a, *b*, *c*. Ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
d. Ad. sk.	Thibet.	Gould Coll.
e. ♂ ad.; *f*. ♀ ad.; *g*, *h*. ♂ ♀ imm. sk.	Gilgit, Feb. 1878 (*J. Biddulph*).	Hume Coll.
i. ♂ ad. sk.	Gilgit, Feb. 24, 1879.	Dr. J. Scully [P.].
k. ♂ ad. sk.	Gilgit, Feb. 14, 1879.	Col. Biddulph [C.].
l. ♂ ad. sk.	Pir Pungal, Cashmere, May 12, 1871 (*W. E. Brooks*).	Hume Coll.
m. Ad. sk.	Chamba, Jan. 1882 (*C. H. T. Marshall*).	Hume Coll.
n. Juv. sk.	Sutley Valley.	Hume Coll.
o. Ad. sk.	Narkunda, Dec. 1868.	Hume Coll.
p, *q*, *r*. ♂ imm. sk.	North of Simla (*Dr. Stoliczka*).	Hume Coll. (Types of species.)
s. Ad. sk.	Kulu (*Major Hay*).	Gould Coll.
t–*y*. Ad.; *z*–*b'*. Imm. sk.	Jural in Kunaitee, Dec. 1870.	Hume Coll.
l', *m'*. Ad.; *n'*. Juv. sk.	Totulee in Kotekhaie, Feb. 27, 1871.	Hume Coll.
o'. Imm. sk.	Pumlahi, near Kotegurh, July 17, 1869.	Hume Coll.
p', *q'*, *r'*, *s'*, *t'*. ♂ ad.; *u'*. ♀ imm.; *v'*, *w'*. ♀ ad. sk.	Simla, Nov. 1880 (*W. Davison*).	Hume Coll.

x, *y*'. ♂ ad.; *z*', *a*. ♀ ad.; *β*. ♀ imm. sk.	Simla, Dec. 1880.	Hume Coll.
γ, *δ*. ♂ ♀ imm. sk.	Simla.	Hume Coll.
ε. Ad.; *ζ*. ♀ ad. sk.	Masuri, 5500 feet, March 11, 1869.	Hume Coll.
η. Ad.; *θ*. Juv. sk.	Middle range of hills north of Masuri.	Hume Coll.
ι. ♀ ad. sk.	Derali, May 20, 1874 (*W. E. Brooks*).	Hume Coll.
κ–*μ*. Ad.; *ν*, *ξ*. Juv. sk.	Kumaon (*Strachey*).	India Museum.
o. Ad. sk.	Pushut, Afghanistan (*Griffith*).	India Museum.

9. Montifringilla nemoricola.

Fringillauda nemoricola, *Hodgs. Asiat. Research.* xix. p. 158 (1836); *id. Icon. ined. in Brit. Mus., Passeres,* pl. 288 (no. 450); *id. in Gray's Zool. Misc.* p. 84 (1844); *Bp. & Schl. Monogr. Loxiens,* pl. 47 (1850); *Bp. Consp.* i. p. 538 (1850); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 491 (1856, pt.); *Swinh. P. Z. S.* 1871, p. 385; *Hume, Str. F.* 1873, p. 41; *David & Oust. Ois. Chine,* p. 334 (1877); *Hume, Str. F.* 1879, p. 108.

Montifringilla nemoricola, *Blyth, J. A. S. Beng.* xiii. p. 954 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 107 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 121 (1849).

Fringilla nemoricola, *Gray, Gen. B.* ii. p. 372 (1849); *id. Hand-l. B.* ii. p. 86, no. 7255 (1870); *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1879).

Leucosticte nemoricola, *Blyth, J. A. S. Beng.* xxiii. p. 213 (1854).

Adult. Similar to *M. sordida*, but a little larger, the wing-coverts tipped and edged with pure white, and the axillaries tinged with sulphur-yellow or orange: "bill and legs fleshy brown; iris red-brown" (*B. H. Hodgson*); "bill brown, with the base paler and the lower mandible yellowish; feet and claws brown; iris clear nut-brown" (*A. David*). Total length 6·2 inches, culmen 0·55, wing 3·9, tail 2·55, tarsus 0·8.

Sexes alike. (*B. H. Hodgson.*)

Immature birds, as in the case of *M. sordida*, have the crown and ear-coverts pale uniform fawn-colour or yellowish brown.

Hab. Eastern Himalayas from Nepal to Bootan, extending to the mountains of Moupin and Kokonoor in Western China.

a, *b*. Ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
c, *d*. Ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
e, *f*. Ad.; *g*, *h*, *i*, *k*. Juv. sk.	Native Sikhim, Jan. 1874 (*L. Mandelli*).	Hume Coll.
l, *m*, *n*, *o*. Ad.; *p*–*w*. Juv. sk.	Native Sikhim, March 1874 (*L. Mandelli*).	Hume Coll.
x. Ad. sk.	Interior of Native Sikhim, May 1873 (*L. Mandelli*).	Hume Coll.
y, *z*–*a*'. Ad. sk.	Interior of Sikhim, July 1873 (*L. Mandelli*).	Hume Coll.
b'. Ad.; *c*', *d*'. Juv. sk.	Interior of Sikhim, Oct. 1873 (*L. Mandelli*).	Hume Coll.

e', *f'*. Ad.; *g'*, *h'*, *i'*. Juv. sk.	Sikkim, Jan. 1874 (*L. Mandelli*).	Hume Coll.
k'. ♂ ad. sk.	Sikhim, April 1873 (*L. Mandelli*).	Hume Coll.
l', *m'*. Ad. sk.	Sikhim, May 1873 (*L. Mandelli*).	Hume Coll.
n'. Ad. sk.	Sikhim (*W. E. Brooks*).	Hume Coll.
o'–*r'*. Ad.; *s'*, *t'*, *u'*. Juv. sk.	Sikhim.	Hume Coll.
v', *w'*. ♂ imm. sk.	Darjiling, Dec. 1869.	Hume Coll.
x. Imm. sk.	Darjiling (*J. Gammie*).	Hume Coll.
y'. Ad. sk.	Lachung, April 1872 (*L. Mandelli*).	Hume Coll.
z', *a*. Ad.; *β*, *γ*, *δ*, *ε*. Juv. sk.	Bootan (*Pemberton*).	India Museum.

10. Montifringilla brandti.

Leucosticte brandti, *Bp. Consp.* i. p. 537 (1850); *Salvad. P. Z. S.* 1868, p. 580; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dresser, Ibis*, 1875, p. 242; *Biddulph, Ibis*, 1881, p. 88; *Severtz. Ibis*, 1883, p. 58.

Montifringilla hæmatopygia, *Gould, P. Z. S.* 1851, p. 114; *id. B. Asia*, v. pl. 3 (1851); *Pelz. Ibis*, 1868, p. 319; *Hume & Henders. Lahore to Yark.* p. 261 (1873); *Scully, Str. F.* 1876, p. 171.

Leucosticte hæmatopygia, *Salvad. P. Z. S.* 1868, p. 580; *Hume, Str. F.* 1879, p. 108; *Severtz. Ibis*, 1883, p. 58.

Linaria hæmatopygia, *Gray, Hand-l. B.* ii. p. 110, no. 7661 (1870).

Leucosticte pamirensis, *Severtz. Ibis*, 1883, p. 58.

Adult. Mantle and upper back sooty brown, streaked with blackish brown; scapulars ashy grey, with dusky shaft-stripes; lower back and rump dusky brown, the feathers edged with rosy at the tips; lesser and median coverts ashy grey, with dusky shaft-lines and hoary on the edges; greater coverts dusky brown, externally ashy grey like the rest of the coverts; bastard-wing black, narrowly fringed with whitish; primary-coverts and quills dusky blackish, edged with white, more broadly on the secondaries, the inner secondaries being margined with brown; upper tail-coverts pale brown, with whitish edges; tail-feathers blackish brown, edged with white, more broadly on the outer ones; crown of head and hind neck sooty black, deeper black on the forehead and crown; lores and feathers round the eye and at base of bill black; ear-coverts and sides of hinder crown dark ashy brown; cheeks and throat dark ashy brown, blackish on the chin and fore part of the cheeks; remainder of under surface of body ashy grey, with dusky shaft-lines to the breast-feathers; lower abdomen white; sides of body and flanks ashy grey like the breast; thighs and under tail-coverts whitish, the latter with dusky shaft-lines; under wing-coverts and axillaries white; quills below dusky, ashy white along the inner edge: bill black in summer, "brownish dusky in autumn, yellow at base below; legs, feet, and claws black; iris brown" (*J. Scully*). Total length 7 inches, culmen 0·45, wing 4·5, tail 3·1, tarsus 0·8.

The *adult female* resembles the male, but has the rosy colour of

the rump duller and less pronounced. Total length 6·8 inches, culmen 0·5, wing 4·5, tail 2·9, tarsus 0·75.

Younger birds have the rump more orange, and apparently do not get the full rosy tint for at least two seasons.

Young in first plumage. Very similar to the adult of *M. nemoricola*, but with red margins to the feathers of the rump. General colour above tawny brown, the mantle and upper back broadly streaked with black centres to the feathers; rump uniform ashy grey, some of the feathers with rosy margins; lesser and median coverts uniform ashy, with creamy-white margins; greater coverts dusky brown, tipped with tawny buff; bastard-wing black; primary-coverts black, edged with pearly grey; quills dusky blackish, externally ashy fulvous, the inner primaries edged with white near the ends; upper tail-coverts dull ashy brown, broadly margined with dull ochreous white; tail-feathers dusky blackish, edged with ashy, the outer feathers with white; crown of head uniform ashy grey; lores and sides of crown ashy ochreous; ear-coverts, cheeks, and sides of neck uniform ashy brown; throat whitish; remainder of under surface of body ashy brown, washed with pale tawny buff; abdomen whitish; sides of body and flanks like the breast; thighs and under tail-coverts ochreous buff, the latter with dark brown centres; under wing-coverts and axillaries white, with dusky bases; quills below dusky, ashy along the inner web: "lower mandible entirely yellow, the upper one grey horny" (*J. Scully*). Total length 6·5 inches, culmen 0·45, wing 4·55, tail 3·1, tarsus 0·85.

The specimen described is a female bird obtained by Mr. W. T. Blanford in the Kangra Lama Pass, Sikhim, on October 5, 1870. Two male specimens procured on the same date by Mr. H. J. Elwes have more rosy margins to the feathers of the rump, but are in general respects similar to the female described. Both are beginning to moult; and instead of the uniform ashy head, they have tawny-buff feathers with black bases, foreshadowing the appearance of the *first winter plumage of the young*. This we also know from the series collected in October by Dr. Stoliczka during the second Yarkand Expedition. The whole upper surface is sandy brown, with darker brown centres to the feathers of the mantle and back, the lower back having rosy ends to the feathers; wings and tail as in the foregoing description, but all the feathers obscured by sandy-buff margins; under surface of body plain sandy buff, more ashy on the throat and breast. Some of the specimens have a faint rosy tinge on the lesser and median wing-coverts; in others, mostly females, this is absent or replaced by saffron-yellow, the rosy colour of the lower back being absent.

The late Dr. Severtzoff recognized three forms of *M. brandti*, consisting of the typical species, *M. hæmatopygia*, and *M. pamirensis*; and Mr. Seebohm has kindly lent me the specimens on which these differences were founded, including the types of *M. pamirensis*. *L. brandti* is said to differ from the last-named species in having no red margins to the rump-feathers, and only a few red-marked feathers on the rump, the lesser wing-coverts being rosy in the male

and buffy rufous in the female. The type of the latter is quite a young bird, which accounts for the absence of rosy colour. The true *M. hæmatopygia* is said by Severtzoff to resemble *M. brandti*, but to have the whole of the rump rosy, with the tips of the feathers crimson; the lesser wing-coverts asby, with no rosy on the margin.

There seems to me to be nothing in these differences of plumage but what can be reasonably accounted for by age. In a large series, such as I have examined (over 50 skins), it is evident that very little stress can be placed on the amount of rose-colour on the rump. In young birds it is apparently feebly developed, and is sometimes absent altogether in winter plumage.

The *winter plumage of the adults* differs from the summer plumage in being altogether more tawny buff, and the edges of the feathers becoming shed, the head, and gradually the back, gets black; curiously enough the red edgings to the wing-coverts are never seen in the black-headed stage, and hence Dr. Severtzoff's contention that this form, the true *M. hæmatopygia*, is specifically distinct from *M. brandti* and *M. pamirensis*. The red margins to the wing-coverts are, however, so much more plain in the winter plumage, that I believe them to be characteristic of that season, being entirely lost by abrasion as the summer plumage is put on.

Hab. Interior of Himalayas, from Sikhim to Kulu and Upper Cashmere and Ladak, extending into Kashgar and the Thian-Shan mountains.

a–f. Ad.; *g*. Juv. sk.	Kashgar (*Dr. Bellew*).	India Museum.
h, *i*. Ad. sk.	Western Thibet.	Earl of Gifford [P.]. (Types of species.)
k, *l*. Ad. sk.	Ladak.	Purchased.
m, *n*. ♂; *o*. ♀ ad. sk.	Chang-la Pass, Ladak, July 11, 1870 (*Dr. G. Henderson*).	Hume Coll.
p, *q*. Ad. sk.	Kulu (*Major Hay*).	India Museum
r, *s*, *t*. Ad. sk.	Kulu (*Major Hay*).	Gould Coll.
u, *v*, *w*. ♂; *x*, *y*. ♀ ad. sk.	Gilgit, Feb. (*J. Biddulph*).	Hume Coll.
z–c'. Ad. sk.	Native Sikhim, April (*L. Mandelli*).	Hume Coll.
d'. Ad. sk.	Native Sikhim, July (*L. Mandelli*).	Hume Coll.
e'. Ad. sk.	Native Sikhim, August (*L. Mandelli*).	Hume Coll.
f'. Ad. sk.	Native Sikhim, Sept. (*L. Mandelli*).	Hume Coll.
g'. ♂ ad. sk.	Interior of Sikhim, June (*L. Mandelli*).	Hume Coll.
h', *i'*, *k'*. Ad. sk.	Interior of Sikhim, July (*L. Mandelli*).	Hume Coll.
l', *m'*. ♂ ad. sk.	Kangra Lama, Sikhim, Oct. 5 (*H. J. Elwes*).	Hume Coll.
n. Juv. sk.	Kangra Lama, Sikhim (*W. T. B.*).	W. T. Blanford, Esq. [P.].
o', *p'*, *q'*. Ad. sk.	Thibet, March (*L. Mandelli*).	Hume Coll.
r'. Ad. sk.	Thibet, July (*L. Mandelli*).	Hume Coll.

11. Montifringilla arctoa.

Passer arctous, *Pall. Zoogr. Rosso-Asiat.* ii. p. 11 (1811).
Fringilla (Linaria) gebleri, *Brandt, Bull. Sci. Acad. St. Pétersb.* x. p. 251 (1842).
Fringilla arctoa, *Gray, Gen. B.* ii. p. 372 (1849).
Montifringilla arctoa, *Bp. & Schl. Monogr. Loxiens*, p. 38, pls. 44, 45 (1850); *Gould, B. Asia*, v. pl. 2 (1851); *Homeyer, J. f. O.* 1879, p. 175, 1880, p. 153.
Leucosticte arctoa, *Bp. Consp.* i. p. 537 (1850); *Baird, B. N. Amer.* p. 430, pl. 74. fig. 1 (1858); *Dybowski & Parvex, J. f. O.* 1868, p. 335; *Salvad. P. Z. S.* 1868, p. 580; *Baird in Cooper, B. Calif.* p. 165 (1870); *Tacz. J. f. O.* 1873, p. 91; *id. Bull. Soc. Zool. France*, i. p. 178 (1876); *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 213 (1880); *Homeyer & Tancré, MT. Orn. Ver. Wien*, 1883, p. 89; *Coues, Key N. Amer. B.* 2nd ed. p. 352 (1884).
Montifringilla gebleri, *Salvad. P. Z. S.* 1868, p. 580.
Linaria arctoa, *Gray, Hand-l. B.* ii. p. 110, no. 7658 (1870).
Fringilla gebleri, *Gray, t. c.* p. 85, no. 7254 (1870).
Hypolia arctoa, *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 236 (1880).

Adult. General colour above uniform dark chocolate-brown, with slight traces of paler edges to the feathers of the mantle and back; lesser wing-coverts dark chocolate-brown like the back; median coverts hoary blackish along the shafts and at the tips; greater coverts, bastard-wing, primary-coverts, and quills ashy, externally hoary white, the shafts blackish as well as the end of the feathers; upper tail-coverts and tail-feathers hoary white, dusky blackish at the tips; crown of head like the back, with an indistinct band of light brown, commencing from behind the eye and encircling the nape and hind neck; lores blackish; ear-coverts, cheeks, and entire under surface of body dark chocolate-brown, with a very faint reddish tint; thighs dark chocolate-brown; under tail-coverts hoary white with blackish shaft-lines; under wing-coverts brown, washed with hoary grey at the ends; axillaries like the breast; quills below dusky, ashy whitish along the inner edge. Total length 6·5 inches, culmen 0·5, wing 4·35, tail 2·75, tarsus 0·8.

The sexes do not differ in colour. An adult female measures:— Total length 6·5 inches, culmen 0·5, wing 4·3, tail 2·9, tarsus 0·8.

Young birds in first winter plumage are much paler brown, with dull sandy-coloured edges to the feathers, and having the back mottled with dusky centres; the sides of the face and the entire under surface of the body have the feathers edged with pale ashy, the abdomen becoming lighter.

Hab. Eastern Siberia.

a–e. Ad. sk.	E. Siberia.	Moscow Museum.
f. ♂ imm. sk.	Kultuk, Lake Baikal, Nov. 8.	Purchased.
g. Ad. st.	Sea of Ochotsk.	Purchased.

12. Montifringilla gigliolii.

? Passer arctous, β, *Pall. Zoogr. Rosso-Asiat.* ii. p. 22 (1811).
Leucosticte gigliolii, *Salvad. P. Z. S.* 1868, p. 579, pl. xliv.; *Taez. J. f. O.* 1873, p. 91; *id. Bull. Soc. Zool. France*, i. p. 179 (1876).
Linaria gigliolii, *Gray, Hand-l. B.* ii. p. 110, no. 7662 (1870).

Adult male. General colour above chocolate-brown, with more or less indications of sandy-brown edges to the feathers, the scapulars and lower back washed with dull crimson; rump and upper tail-coverts sooty black; lesser wing-coverts blackish with a slight reddish tint; median and greater coverts black, with narrow whity-brown edges: bastard-wing, primary-coverts, quills, and tail-feathers black, narrowly fringed with whity brown, more distinct on the inner secondaries; crown of head dark ashy grey, the feathers obscured with dusky margins; the occiput, nape, and hind neck lighter and more earthy brown, forming an indistinct collar; lores and nasal plumes dusky brown; ear-coverts and cheeks cindery grey; throat and under surface of body dark cindery grey, a little more hoary on the throat; breast and sides of body and flanks dull crimson; centre of abdomen dark ashy; thighs lighter brown; under tail-coverts blackish, with sandy-brown margins; under wing-coverts dusky blackish, the axillaries browner; quills below dusky, ashy along the inner edge. Total length 6·7 inches, culmen 0·45, wing 4·25, tail 2·8, tarsus 0·8.

The *adult female* resembles the male.

A *young female in winter* has none of the reddish tints of the adult, and is decidedly browner, the head being edged with brown like the back, so that the nuchal collar is entirely obliterated; the dusky feathers of the rump and upper tail-coverts edged with ashy brown, and the whole of the under surface of the body obscured by ashy-grey margins to the feathers.

Hab. Baikal region, Eastern Siberia.

a. ♂ ad. sk.	Lake Baikal.	Dr. Dybowski [C.].
b. ♂ ad. sk.	Kultuk, Lake Baikal, Jan. 20, 1869.	Dr. Dybowski [C.].
c. ♂; *d–e*. ♀ ad. sk.	Kultuk, Nov.	Purchased.

13. Montifringilla tephrocotis.

Linaria (Leucosticte) tephrocotis, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 265, pl. 50 (1831).
Leucosticte tephrocotis, *Swains. Classif. B.* ii. p. 281 (1837); *Bp. Consp.* i. p. 536 (1850); *Baird, B. N. Amer.* p. 430 (1858); *Blakist. Ibis*, 1863, p. 71; *Salvad. P. Z. S.* 1868, p. 580; *Baird in Cooper's B. Calif.* p. 164 (1870); *Coues, Key N. Amer. B.* p. 130 (1872); *id. B. N.-West*, p. 111 (1874, excl. syn.); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 504, pl. 23. fig. 8 (1874); *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 177 (1880); *Coues, Check-list*, p. 48 (1882); *id. Key N. Amer. B.* 2nd ed. p. 35 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list N. Amer. B.* p. 258 (1886).

Fringilla tephrocotis, *Audub. B. Amer.* pl. 424; *id. Orn. Biogr.* v. p. 232 (1839); *Gray, Gen. B.* ii. p. 372 (1849).
Erythrospiza tephrocotis, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *Audub. B. Amer.* 8vo, iii. p. 176, pl. 198 (1841).
Montifringilla tephrocotis, *Bp. & Schl. Monogr. Loxiens*, p. 37, pl. 43 (1850); *Homeyer, J. f. O.* 1880, p. 201.
Linaria tephrocotis, *Gray, Hand-l. B.* ii. p. 110, no. 7657 (1870).
Leucosticte tephrocotis, var. tephrocotis, *Ridgw. Bull. U. S. Geol. Surv.* i. p. 71 (1875).

Adult male. General colour above reddish brown, with palo sandy-buff edges to the feathers of the mantle and back, the lower back, rump, and upper tail-coverts rosy, the feathers being tipped with the latter colour; lesser and median coverts rosy, with dusky brown bases and a subterminal line of whitish; greater coverts dusky brown, edged with buffy white and slightly tinged with rosy; bastard-wing blackish brown, narrowly fringed with rosy; primary-coverts and quills blackish brown, edged with rosy, the secondaries with buffy white like the greater coverts; tail-feathers blackish brown, edged with whitish, slightly tinged with rosy; fore part of crown black; hinder crown, occiput, nape, and hind neck pearly grey, commencing from above the eye; lores and feathers below the eye darker pearly grey; nasal plumes whitish; ear-coverts, cheeks, and under surface of body dark cinnamon-brown; the throat and malar line blackish; the breast and abdomen washed with rosy, with which the feathers are tipped; sides of body and flanks like the breast; thighs brown, tipped with ashy white; vent whitish; under tail-coverts rosy, with dusky bases and a narrow subterminal line of white; under wing-coverts white, edged with rosy; axillaries browner with rosy margins; quills below dusky, ashy along the inner edge. Total length 6·5 inches, culmen 0·45, wing 4·2, tail 2·8, tarsus 0·75.

Adult female. Similar to the male. Total length 6·5 inches, culmen 0·5, wing 4·25, tail 2·7, tarsus 0·8.

Hab. Interior of British North America, south in winter throughout the entire Rocky-Mountain region of the United States, but most abundant on the eastern slope. (*A. O. U. Check-list, l. c.*)

a. Ad. sk.	Nebraska (*Dr. F. V. Hayden*).	Sclater Coll.
b. ♀ ad. sk.	Deer Creek, Nebraska, Jan. 17 (*Dr. F. V. Hayden*; Sm. no. 19256).	Salvin-Godman Coll.
c. ♀ ad. sk.	Deer Creek, Nov. 21 (*G. H. Trook*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Fort Shaw, Jan. 9 (*Dr. J. C. Merrill*; Sm. no. 80032).	U.S. Nat. Museum [P.].
e. ♂ ad. sk.	Colorado, winter (*Mrs. M. A. Maxwell*).	Salvin-Godman Coll.

14. Montifringilla atrata.

Leucosticte atrata, *Ridgw. Bull. U. S. Geol. Surv.* i. p. 69 (1875); *id. Proc. U. S. Nat. Mus.* iii. p. 177 (1880); *Coues, Key N. Amer. B.* 2nd ed. p. 350 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list*, p. 259 (1886).

Adult male. General colour black, darker than the frontal patch, deepest anteriorly; grey of the head confined to the lateral and posterior portions of the pileum as in *L. tephrocotis*. Sexes very dissimilar in shades of coloration. Wing 4·02 inches, tail 2·97, culmen 0·43, tarsus 0·77. (*Ridgway, l. c.*)

Adult female. General colour dusky slate, lighter than the frontal patch, and with a faint brownish cast on the dorsal region. Wing 3·9 inches, tail 2·9, culmen 0·44, tarsus 0·79. (*Ridgway, l. c.*)

Hab. In winter, mountains of Colorado and Utah; summer range not known.

15. Montifringilla australis.

Leucosticte griseinucha, *Allen, Amer. Nat.* vi. p. 350 (1872, *nec Brandt*).

Leucosticte tephrocotis (*nec Sw. & Rich.*), *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 177 (1872); *Coues, B. N.-West*, p. 111, footnote (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p 504, pl. 23. fig. 9 (1874).

Leucosticte tephrocotis, var. australis, *Allen, MSS.*: *Ridgw. Bull. Essex Inst.* v. p. 182 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 509 (1874).

Leucosticte australis, *Ridgw. Bull. U. S. Nat. Mus.* i. p. 79 (1875); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 249, pls. 5, 6 (1875); *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 177 (1880); *Coues, Check-list N. Amer. B.* p. 48 (1882); *id. Key N. Amer. B.* 2nd ed. p. 350 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list N. Amer. B.* p. 259 (1886).

Adult male. Similar to *L. tephrocotis*, and with the same brown ear-coverts, but easily distinguished by the absence of pearly grey on the hinder crown and neck, these parts resembling the brown of the back. Total length 6·3 inches, culmen 0·45, wing 4·2, tail 2·75, tarsus 0·8.

Hab. Mountains of Colorado, breeding above the timber-line, descending into the valleys in winter. New Mexico (*A. O. U. Check-list, l. c.*).

a. ♂ ad. sk.	Mount Lincoln, Colorado, July 25 (*J. A. Allen*; Sm. no. 15726).	Salvin-Godman Coll.
b. ♂ ad. sk.	Colorado, spring (*J. Stevenson*; Sm. no. 72957).	Salvin-Godman Coll.
c. ♂ ad. sk.	South Park, Colorado, July 25 (*S. Rothrock*; Sm. no. 79578).	H. K. Coale, Esq. [P.].

16. Montifringilla griseinucha.

Passer arctous, var., *Pall. Zoogr. Rosso-Asiat.* ii. p. 23 (1811).

Fringilla (Linaria) griseonucha, *Brandt, Bull. Sci. Acad. St. Petersb.* x. p. 252 (1842).

Leucosticte griseogenys, *Gould, P. Z. S.* 1843, p. 104; *id. Voy.* '*Sulphur*,' p. 42, pl. 23 (1844).

Fringilla griseogenys, *Gray, Gen. B.* ii. p. 372 (1849).

Fringilla griseonucha, *Gray, t. c.* p. 372 (1849).

Montifringilla pustulata, *Cab. in Ersch u. Grub. Encycl.* 1st sect. vol. l. p. 215 (1849).

Montifringilla griseinucha, *Bp. & Schl. Monogr. Loxiens*, p. 35, pl. 41 (1850); *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 57 (1872); *Homeyer, J. f. O.* 1880, p. 153.

Leucosticte griseonucha, *Bp. Consp.* i. p. 537 (1850); *Cab. Mus. Hein.* Th. i. p. 154 (1850); *Baird, B. N. Amer.* p. 430 (1858); *Salvad. P. Z. S.* 1868, p. 580; *Elliot, New & Unfig. B. N. Amer.* pl. 12 (1869); *Dall & Bann. Trans. Chic. Acad.* i. p. 282 (1869); *Baird, t. c.* p. 317, pl. 28. fig. 2 (1869); *id. in Cooper's B. Calif.* p. 161 (1870); *Dall, Notes Avif. Aleut. Isl. East*, p. 3 (1873); *id. op. cit. West*, p. 4 (1874); *Ridgw. Bull. U. S. Geol. Surv.* i. p. 77 (1875); *id. Proc. U. S. Nat. Mus.* iii. pp. 2, 176 (1880); *Coues, Check-list*, p. 49 (1882); *Nelson, Cruize 'Corwin,'* 1883, p. 67; *Bean, Proc. U. S. Nat. Mus.* v. pp. 148, 172 (1882); *Tacz. Bull. Soc. Zool. France*, vii. p. 392 (1882); *Dybowski, op. cit.* viii. p. 364 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 351 (1884); *Stejneger, Auk*, i. p. 82 (1884); *Turner, Auk*, ii. p. 157 (1885); *A. O. U. Check-list N. Amer. B.* p. 258 (1886); *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 261 (1886).

Fringilla pustulata, *Kittl. Denkw. Reis. Russ. Amer.* i. p. 278 (1858).

Linaria griseonucha, *Kittl. t. c.* p. 278 (1858); *Gray, Hand-l. B.* ii. p. 110, no. 7659 (1870).

Montifringilla speciosa, *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 60 (1872).

Leucosticte tephrocotis, var. griseonucha, *Coues, Key N. Amer. B.* p. 130 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 508 (1874); *Ridgw. Bull. U. S. Geol. Surv.* i. p. 77 (1875).

Leucosticte tephrocotis, β. griseonucha, *Coues, B. N.-West*, p. 111 (1874, pt.); *Elliot, Monog. Seal Isl.* p. 127 (1882).

Leucosticte tephrocotis (*nec Sw. & Rich.*), *Harting, Fauna Prybil. Isl.* p. 16 (1875).

Leucosticte brunneinucha (*nec Brandt*), *Stejneger, Proc. U. S. Nat. Mus.* vi. p. 71 (1883).

Adult male. General colour above chocolate-brown, the rump and upper tail-coverts broadly washed with rose-colour at the end of the feathers, some of the latter with a subterminal bar of white; lesser and median coverts dusky brown, tipped with rose-colour, before which is a subterminal line of white; greater coverts dusky brown, edged with white, tinged here and there with rosy (in fresh plumage these coverts resembling the others); bastard-wing dark brown; primary-coverts and quills dusky brown, edged with white, the primaries with pale rose-colour; tail-feathers dark brown, edged with whitish; fore part of crown black; hinder crown, nape, and hind neck pearly grey; lores and feathers below the eye dusky; nasal plumes pearly grey; sides of crown from above the eye, sides of face, ear-coverts, and cheeks pearly grey like the hind neck and sides of the latter; throat and under surface of body chocolate-brown, washed with dull crimson, with which the feathers are tipped; the chin ashy black, as also the malar line; the lower breast and abdomen more strongly washed with crimson; sides of body and flanks like the breast, the lower abdomen and vent ashy whitish; thighs brown; under tail-coverts dusky brown, subterminally white and tipped with rosy; under wing-coverts white, with dusky bases

and slightly washed with rosy; axillaries brown; quills below dusky, ashy along the inner edge: "bill black, with a faint yellowish spot at the base of the tomia of the upper mandible and another on the base of the genys" (*L. Stejneger*). Total length 7·5 inches, culmen 0·6, wing 4·35, tail 2·75, tarsus 0·95.

In *winter plumage the male* has the bill yellow and the whole of the feathers more or less obscured with pale margins, which become abraded and worn off in summer: "bill orange-yellow, the tip of both mandibles blackish; feet black, both above and below; iris dark hazel" (*L. Stejneger*).

Young. General colour uniform sooty brown, washed with chocolate-brown and tinged with ashy grey, the bases of the feathers being of the latter colour; wing-coverts dull ashy, edged with tawny buff, with a subterminal line of white; bastard-wing black; primary-coverts and quills blackish, narrowly edged with ashy whitish, the secondaries with tawny buff, broader on the inner ones; tail-feathers blackish, edged with dull white; crown of head, sides of face, and under surface of body like the upper surface: "bill ochraceous yellow, dusky towards the tip; angle of mouth lighter and brighter yellow; feet very dark greyish brown; iris dark hazel" (*L. Stejneger*).

Hab. Aleutian Islands: Kodiak, Unalashka, Prybilof, and Commander Islands.

a. Ad. sk.	[Alaska.]	J. Gould, Esq.
b. Ad. sk.	Kodiak, Alaska (*Dr. Panshon*; Sm. no. 70102).	R. B. Sharpe, Esq. [P.].
c. Ad. sk.	Kodiak, Feb. 9, 1869 (*F. Bischoff*; Sm. no. 58089).	Salvin-Godman Coll.
d. Ad. sk.	S. George's Island, Alaska, June 11, 1873 (*H. W. Elliot*; Sm. no. 64150).	Salvin-Godman Coll.
e. Juv. sk.	S. George's Island, July 12 (*H. W. Elliot*; Sm. no. 64181).	Salvin-Godman Coll.
f. Ad. sk.	S. George's Island, June 13, 1873 (*H. W. Elliot*; Sm. no. 64188).	U. S. Nat. Museum [P.].

17. Montifringilla littoralis.

Leucosticte griseinucha (*nec Brandt*), *Brown, Ibis*, 1868, p. 422; *Elliot, New & Unfig. B. N. Amer.* part x. (1868).
Leucosticte littoralis, *Baird, Trans. Chicago Acad.* i. p. 318, pl. xxviii. fig. 1 (1869); *Dall & Bann. t. c.* p. 282 (1869); *Baird, in Cooper's B. Calif.* p. 162 (1870); *Ridgw. Orn. 40th Parallel*, p. 461 (1887).
Leucosticte campestris, *Baird, in Cooper's B. Calif.* p. 163 (1870).
Linaria littoralis, *Gray, Hand-l. B.* ii. p. 110, no. 7663 (1870).
Leucosticte tephrocotis, var. littoralis, *Coues, Key N. Amer. B.* p. 130 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 507 (1874); *Ridgw. Bull. U.S. Geol. Surv.* i. p. 74 (1875).
Leucosticte tephrocotis, var. campestris, *Coues, Key N. Amer. B.* p. 130; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 507, pl. xxiii. fig. 7 (1874).
Leucosticte tephrocotis littoralis, *Ridgw. Bull. U.S. Nat. Mus.* iii.

p. 177 (1880); *Coues, Check-list*, p. 48 (1882); *id. Key N. Amer. B.* 2nd ed. p. 351 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list N. Amer. B.* p. 258 (1886).

Adult male. Similar to *M. griseinucha*, but smaller, and having the brown of the back and breast much brighter and more chestnut-brown; the black patch on the forehead less extended over the crown, the pearly-grey colour on the latter and on the sides of the face being much lighter and occupying the malar region also, so that the dark throat is narrowed. Total length 6 inches, culmen 0·5, wing 4·15, tail 2·6, tarsus 0·75.

Adult female. Similar to the male in plumage. Total length 5·2 inches, culmen 0·5, wing 4·2, tail 2·6, tarsus 0·75.

In winter the same change of plumage takes place as in *M. griseinucha*, all the feathers having paler edges, which become abraded in summer. The bill also is yellow.

A female collected by Capt. Bendire has the whole throat brown like the breast, and also a few brown feathers interspersed among the grey of the cheeks, looking as if it was a hybrid between *M. littoralis* and *M. tephrocotis*.

Hab. In summer, probably the interior mountainous regions of British Columbia; in winter, the north-west coast from Kodiak southward and eastward in the Rocky-Mountain region to Colorado. (*A. O. U. Check-list*, *l. c.*)

a, *b*. ♂ ad.; *c*. ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
d. ♀ ad. sk.	Camp Harney, Oregon (*C. Bendire*; Sm. no. 70433).	U.S. National Museum [P.].
e, *f*. ♂ ♀ ad. sk.	Camp Harney, Jan. (*C. Bendire*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Fort Shaw, Feb. 16, 1880 (*Dr. J. C. Merrill*; Sm. no. 80047).	U.S. National Museum [P.].

18. Montifringilla brunneinucha.

Fringilla (Linaria) brunneinucha, *Brandt, Bull. Sci. Acad. St. Pétersb.* x. p. 252 (1842).

Fringilla brunneinucha, *Gray, Gen. B.* ii. p. 372 (1849).

Montifringilla brunneinucha, *Bp. & Schl. Monogr. Loxiens*, p. 36, pl. 42 (1850); *Gould, B. Asia*, v. pl. 4 (1852); *Scl. P. Z. S.* 1865, p. 618.

Leucosticte brunneinucha, *Bp. Consp.* i. p. 536 (1850); *Cab. Mus. Hein.* Th. i. p. 154 (1850); *Whitely, Ibis*, 1867, p. 202; *Salvad. P. Z. S.* 1861, p. 580; *Swinh. P. Z. S.* 1871, p. 385; *Tacz. J. f. O.* 1873, p. 92; *Swinh. Ibis*, 1876, p. 450; *Tacz. Bull. Soc. Zool. France*, i. p. 180 (1876); *id. J. f. O.* 1876, p. 200; *David & Oust. Ois. Chine*, p. 334, pl. 89 (1877); *Blakist. & Pryer, B. Japan*, p. 174 (1882); *Tacz. Bull. Soc. Zool. France*, vii. p. 392 (1882); *Dybowski, op. cit.* viii. p. 364 (1883); *Jouy, Proc. U. S. Nat. Mus.* vi. p. 296 (1883); *Blakist. Amended List B. Japan*, p. 62 (1884); *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 322 (1886).

Fringilla brunneonucha, *Kittl. Denkw. Reis. Russ. Amer.* i. p. 336 (1858); *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871).
Linaria brunneonucha, *Gray, Hand-l. B.* ii. p. 110, no. 7659 (1870).
Linaria (Leucosticte) brunneonucha, *Bolau, J. f. O.* 1882, p. 335.

Adult male. General colour above dark brown, mottled with sandy-brown edges to the feathers of the mantle and back; lower back, rump, and upper tail-coverts washed with rosy violet, with which the feathers are tipped; lesser and median coverts rose-colour, with blackish bases; greater coverts blackish, edged with sandy buff, the inner ones with rosy; bastard-wing black; primary-coverts and quills black, edged with pale brown, faintly tinged with rosy, the secondaries margined with white, the innermost broadly edged with brown; tail-feathers blackish brown, edged with whity brown; crown of head dark grey, with hoary-grey shaft-lines; occiput, nape, and hind neck tawny buff, commencing from behind the eye; sides of neck also tawny buff; lores, feathers round eye, and ear-coverts grey, with a hoary lustre; the cheeks, throat, fore neck, and breast dusky, washed with ashy grey, the latter with central spots of pearly grey; remainder of under surface rosy, the feathers having dusky bases; abdomen, sides of body, and flanks also rosy; thighs brown, edged with whitish; under tail-coverts dusky, tipped with rosy, with a subterminal line of white; under wing-coverts white, edged with rosy, the outer ones dusky at base; axillaries light brown, washed with rosy; quills below dusky, light ashy along the inner edge. Total length 6·5 inches, culmen 0·5, wing 4·2, tail 2·7, tarsus 0·8.

The *adult female* resembles the male.

In *winter plumage* the adults are much more sandy-coloured than in summer, the whole of the feathers having sandy margins, obscuring even the grey head; all the feathers of the under surface are broadly margined with pale ashy rose-colour: "bill golden yellow, with the tip dusky; tarsi and toes black; iris dark brown" (*Jouy*).

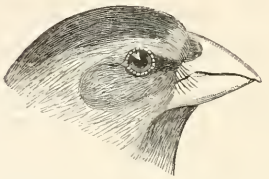
Young birds in first winter plumage show an almost total absence of rose-colour on the rump, and the general tone of the plumage is dull sandy brown, the head a little more dusky.

Hab. Kamtschatka to Japan, Eastern Siberia, and Northern China.

a, b. ♂ ♀ ad. sk.	Kamtschatka.	Purchased.
c. ♂ juv. sk.	Kultuk, Lake Baikal, Nov. 10.	Purchased.
d. Ad. sk.	Hakodadi, Japan (*H. Pryer*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Hakodadi, Feb. 26, 1865 (*H. Whitely*).	Gould Coll.
f. Ad. sk.	Hakodadi, Nov. 21, 1864.	Henry Whitely [C.].
g. ♂ ad. sk.	Hakodadi, Feb. 26, 1865.	Henry Whitely [C.].
h. ♀ ad. sk.	Hakodadi, March 3, 1865.	Henry Whitely [C.].

33. RHODOPECHYS.

Rhodopechys, *Cab. Mus. Hein.* Th. i. p. 157, note (1850) Type. R. sanguinea.



Head of *Rhodopechys sanguinea*.

Range. From Palestine to Eastern Asia Minor and the Caucasus, through Persia to Turkestan and Yarkand.

1. Rhodopechys sanguinea.

Fringilla sanguinea, *Gould, P. Z. S.* 1837, p. 127; *Dickson & Ross, P. Z. S.* 1839, p. 121.
Erythrospiza phœnicoptera, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *id. & Schl. Monogr. Loxiens*, p. 27, pls. 30, 31 (1850); *Bp. Consp.* i. p. 535 (1858).
Carpodacus phœnicopterus, *Gray, Gen. B.* ii. p. 384 (1844); *Tristr. Ibis*, 1868, p. 208.
Fringilla rhodoptera, *Licht. MSS. in Mus. Berol.*
Carpodacus rhodopterus, *Licht. Nomencl. Av. Berol.* p. 48 (1854).
Rhodopechys sanguineus, *Cab. Mus. Hein* Th. i. p. 157, note (1850); *Bp. Rev. et Mag. de Zool.* 1857, p. 124; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 460 (1856); *Loche, Expl. Sci. Algér., Ois.* i. p. 163 (1867); *Gould, B. Asia*, v. pl. 28 (1877).
Fringilla coccothraustes sanguinea, *Bree, B. Eur.* iii. p. 95 (1864).
Erythrospiza rhodoptera, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 655 (1870); *Radde, Orn. Cauc.* p. 167 (1884).
Carpodacus sanguineus, *Gray, Hand-l. B.* ii. p. 101, no. 7528 (1870).
Erythrospiza sanguinea, *Blanf. East. Persia*, ii. p. 252 (1876); *Dresser, B. Eur.* iv. p. 91, pl. 197 (1876); *Hume, Str. F.* 1879, p. 108; *Tristr. Faun. & Flor. Palest.* p. 70 (1884).

Adult male. General colour above chocolate-brown, mottled with subterminal blackish marks on the feathers of the mantle and upper back; lower back lighter and more sandy brown; rump rosy; upper tail-coverts also rosy, the long ones black, edged with rosy; lesser wing-coverts sandy brown washed with rosy; median and greater coverts brown, edged with rosy; the latter series internally black; bastard-wing black, edged with brown, tinged with rosy; primary-coverts and quills black, edged with bright rosy, the secondaries narrowly tipped with white, the inner ones externally chocolate-brown; all the quills whitish at the extreme base, concealed; centre tail-feathers black, edged with rosy and white at the base, the white increasing towards the outer feathers, and the black more and more confined to the end of the feathers; the outer feathers entirely white, with a black shaft; crown of head black, forming a cap; the forehead scaly in appearance, the feathers minutely tipped with

rosy; lores brighter rosy; eyebrow pale rosy, sandy brown posteriorly; feathers round eye brighter rosy like the lores; ear-coverts, cheeks, and throat sandy brown, with black streaks along the shaft, forming spots larger and more distinct on the fore neck; remainder of under surface of body creamy white, tinged with rosy; abdomen a little paler; sides of body sandy brown, minutely streaked with black, the lower flanks creamy white tinged with rosy: thighs and under tail-coverts white, with a faint rosy tinge; under wing-coverts and axillaries white, edged with rosy, very distinct on the edge of the wing; quills below dusky, white towards the base of the inner web: "bill yellow, dusky towards the tip of the upper mandible; feet blackish, as also the claws; tarsi pale brownish; soles of feet dark; iris dark brown" (*F. Stoliczka*). Total length 6·2 inches, culmen 0·55, wing 4·1, tail 2·2, tarsus 0·75.

Adult female. Much duller than the male, the crown obscured with sandy-brown edges; on the wing much less rosy, the greater coverts externally brown; base of secondaries conspicuously white; on the rump very little rosy; sides of face and under surface of body paler than in the male, with scarcely any indication of black streaks on the throat. Total length 6·2 inches, culmen 0·5, wing 4·25, tail 2·3, tarsus 0·8.

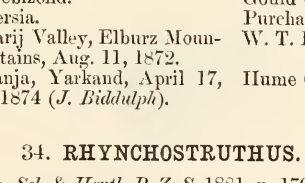
Immature male. Like the old female, but blacker on the head, and dark sandy brown on the throat and sides of the body, which have distinct blackish shaft-lines. The wing resembles that of the old male, and does not show the white patch at the base of the secondaries.

Hab. From Yarkand through Persia to the Caucasus and Eastern Asia Minor to Palestine, and reaching to Arabia and even to Algeria.

a. ♂ ad. sk.	Trebizond.	Zoological Society. (Type of species.)
b, c. ♂ ♀ ad. sk.	Trebizond.	Gould Coll.
d, e. Ad. sk.	Persia.	Purchased.
f. ♂ ad. sk.	Karij Valley, Elburz Mountains, Aug. 11, 1872.	W. T. Blanford, Esq. [C.].
g. ♂ imm.; *h*. ♂ ad. sk.	Panja, Yarkand, April 17, 1874 (*J. Biddulph*).	Hume Coll.

34. RHYNCHOSTRUTHUS.

Rhynchostruthus, *Sel. & Hartl. P. Z. S.* 1881, p. 170.. Type. R. socotranus.



Head of *Rhynchostruthus socotranus*.

Range. Confined to the island of Socotra.

1. Rhynchostruthus socotranus.

Rhynchostruthus socotranus, *Sel. & Hartl. P. Z. S.* 1881, p. 171.
Rhynchostruthus riebecki, *Hartl. P. Z. S.* 1881, p. 954, pl. 72.

Adult male. Above dusky ashy brown, with the crown dusky black, blackish towards the forehead, the throat dusky blackish; a rather large and well-defined mark occupying the ear-coverts, silky white, somewhat shaded with fulvous; greater wing-coverts and outer margins of inner secondaries bright pale yellow, forming a very conspicuous longitudinal band; scapulars and lesser wing-coverts like the back; under wing-coverts varied with whitish and yellow; outer tail-feather entirely dusky, the two centre feathers dusky, indistinctly fringed with yellow, the remainder dusky blackish, with bright yellow margins; under tail-coverts whitish; breast and abdomen greyish buff; bill black. Total length 5·1 inches, culmen 0·55, wing 3·4, tail 1·1, tarsus 0·75. (*Hartlaub.*)

Adult female. Not different, excepting for the somewhat pure ash colour of the breast and abdomen.

The typical examples are evidently young birds with uniform brown upper surfaces and blackish stripes on the breast; but there are evidences of black feathers on all parts of the head and throat, showing that the birds are passing into a black-headed stage, and proving that *R. riebecki* is only the fully adult bird.

Hab. Island of Socotra.

a, b. ♂ imm. sk.	Socotra, March 13, 1880 (*I. B. Balfour*).	British Association [P.]. (Types of species.)

35. RHODOSPIZA.

Erythrospiza, *auct. recent.* (*nec Bp.*).

Head of *Rhodospiza obsoleta.*

Range. From Syria and Persia to Central Asia, Afghanistan, Yarkard, Turkestan, and the western bend of the Hoangho River.

1. Rhodospiza obsoleta.

Fringilla obsoleta, *Licht. in Eversm. Reis.*, Anhang, p. 132 (1823).
Carpodacus obsoletus, *Gray, Gen. B.* ii. p. 384 (1844); *Licht. Nomencl. Av. Berol.* p. 48 (1854); *Gray, Hand-l. B.* ii. p. 102 no. 7523 (1870).
Erythrospiza obsoleta, *Bp. & Schl. Monogr. Loxiens*, p. 28, pl. 32 (1850); *Bp. Consp.* i. p. 535 (1850); *Filippi, Viagg. Pers.* p. 349

(1865); *Hume*, *Str. F.* 1875, p. 219; *Scully*, *Str. F.* 1876, p. 108; *Blanf. East. Pers.* ii. p. 352, pl. xvii. (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 303 (1877); *Gould*, *B. Asia*, v. pl. 29 (1877); *C. Swinh. Ibis*, 1882, p. 114; *Menzbier*, *Ibis*, 1885, p. 353.

Bucanetes obsoletus, *Cab. Mus. Hein.* Th. i. p. 164, note (1850).

Adult male. General colour above pale sandy brown, a little lighter towards the rump; the upper tail-coverts rufous-brown, contrasting with the back; lesser wing-coverts sandy brown, edged with chestnut; median coverts sandy brown, edged with rosy, before which is a shade of ashy whitish; greater coverts pale rosy, with black centres and white tips; bastard-wing brown, edged with whitish; primary-coverts rosy, internally black; quills black, edged with whity brown at the ends, the primaries white externally, the secondaries externally rosy, white near the tips, the white more developed on the inner secondaries, the innermost being black, white externally and sandy brown along the inner web; tail-feathers black, externally white, brownish at the tips; crown of head pale sandy brown like the back; lores, feathers in front of the eye, and a narrow frontal line black; sides of face, cheeks, and under surface of body pale sandy brown with a slight rosy tinge; the abdomen and under tail-coverts whiter; thighs pale sandy brown; under wing-coverts and axillaries white with ashy bases, the edge of the wing rosy; quills below blackish, with the inner edge broadly white; "bill black or greyish dusky; legs and feet brownish fleshy; claws dusky or black; iris brown" (*J. Scully*). Total length 5·7 inches, culmen 0·5, wing 3·45, tail 2·3, tarsus 0·6.

Adult female. Distinguished from the male by its much paler coloration, the quills and tail being brown with light ashy edges; the rosy colour on the wings less strongly developed; the lower rump and upper tail-coverts sandy brown, scarcely paler than the back; no black in front of the eye: "bill dark horn-colour; legs and feet dark fleshy; claws dusky" (*J. Scully*). Total length 5·5 inches, culmen 0·45, wing 3·4, tail 2·25, tarsus 0·6.

In *winter plumage* the male has a yellowish bill and the upper surface has an ashy shade over the sandy-brown colour, the rufous upper tail-coverts being entirely obscured with this ashy shade.

Hab. The same as that of the genus.

a. ♂ ad. sk.	Syria.	M. J. Verreaux.
b. ♂ ad. sk.	Shiraz, Persia, Dec. 1870.	Sir O. St. John [C.].
c. ♂ ad. sk.	Shiraz, Aug. 1870 (*Sir O. St. John*).	Hume Coll.
d. ♂ juv. sk.	Near Abadeh, July 18, 1869.	Sir O. St. John [C.].
e, *f*. ♂ ♀ ad. sk.	Khokand (*Dr. Severtzoff*).	Gould Coll.
g. ♀ ad. sk.	Khokand, March 13, 1860 (*Dr. Severtzoff*).	Gould Coll.
h. ♂ ad. sk.	Tashkend, March 13, 1860 (*Dr. Severtzoff*).	Gould Coll.
i. ♀ ad. sk.	Yarkand (*J. Biddulph*).	Hume Coll.

k. ♂ ad. sk.	Yarkand, Nov. 20, 1873 (*J. Biddulph*).	Hume Coll.
l. ♂ ad. sk.	Yarkand, June 27, 1875 (*J. Scully*).	Hume Coll.
m. ♀ ad. sk.	Yarkand, Jan. 1875 (*J. Scully*).	Hume Coll.
n. ♂ ad. sk.	Coziar, June 1, 1874 (*J. Biddulph*).	Hume Coll.
o, p, q, r. Ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
s. ♀ ad. sk.	Khusan, Western Afghanistan, April 16, 1885.	Dr. Aitchison.
t. ♂ ad. sk.	Kandahar, Dec. 1880.	Col. C. Swinhoe [P.].
u. ♂ juv. sk.	Kandahar, Feb. 2, 1881.	Col. C. Swinhoe [P.].
v, w. ♂ ad. sk.	Kandahar, March 1881.	Col. C. Swinhoe [P.].
x, y. Sterna of spec. *e, d.*	Persia.	Sir O. St. John [C.].

36. ERYTHROSPIZA.

	Type.
Erythrospiza, *Bp. Faun. Ital. Ucc.* pl. 35, text (1832–41)	E. githaginea.
Bucanetes, *Cab. Mus. Hein.* Th. i. p. 164 (1850)	E. githaginea.

Head of *Erythrospiza githaginea*.

Range. Desert countries of Northern Africa, through Palestine and Persia to Central Asia and Mongolia; North-western India.

Key to the Species.

a. With a much larger and stouter bill; greater wing-coverts and quills externally brown or pale rosy ..... *githaginea*, p. 284.

b. With much smaller bill; greater wing-coverts and quills black with a crimson margin, especially distinct on the inner secondaries, which appear subterminally black ..... *mongolica*, p. 287.

1. Erythrospiza githaginea.

Fringilla githaginea, *Licht. Verz. Doubl.* p. 24 (1823).

Pyrrhula payraudæi, *Audouin, Expl. somm. Pl. Ois. Egypte*, p. 286, pl. 5. fig. 8 (1825).

Pyrrhula githaginea, *Temm. Pl. Col.* iii. pl. 400 (1826); *Roux, Orn. Prov.* p. 377, pl. 74 bis (c. 1826); *Temm. Man. d'Orn.* iii. p. 249 (1835); *Werner, Atlas, Granivores*, Suppl. pls. 7, 8; *Bolle, Naum.* 1858, p. 369; *id. Ibis*, 1862, p. 346; *Leith Adams, Ibis*, 1864, p. 23; *Bree, B. Eur.* iii. pl. to p. 81 (1864); *Wright, Ibis*, 1870, p. 489; *F. Godman, Ibis*, 1872, p. 213; *Hume, t. c.* p. 468.

Erythrospiza githaginea, *Bp. Faun. Ital., Ucc.* pl. 35. fig. 3 (1832–

41); *Gould, B. Eur.* iii. pl. 208 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *Bp. & Schl. Monogr. Loxiens*, pl. 33 (1850); *Bp. Consp.* i. p. 535 (1850); *Tristr. Ibis*, 1859, pp. 34, 294; *Taylor, l. c.* p. 49; *Leith Adams, Ibis*, 1864, p. 23; *Chambers, Ibis*, 1867, p. 103; *Degl. & Gerbe, Orn. Eur.* i. p. 252 (1867); *Doderl. Avif. Sicil.* p. 76 (1869); *Fritsch, Vög. Eur.* tab. 22. fig. 3 (1870); *Shelley, B. Egypt*, p. 155, pl. v. (1872); *Dresser, B. Eur.* iv. p. 85, pl. 196 (1875); *Hume, Str. F.* 1878, vol. ii. p. 64; *Butler, t. c.* p. 284; *Hume, t. c.* p. 454; *id. Str. F.* 1879, p. 108; *Butler, Cat. B. Sind &c.* p. 48 (1879); *C. Swinh. Ibis*, 1882, p. 114; *Gould, B. Asia*, iv. pl. xxxi. (1880); *Barnes, Str. F.* 1880, p. 457.

? Pyrrhula sinaica, *Von der Mühle, Orn. Griechenl.* p. 45 (1844).

Carpodacus payraudæi, *Gray, Gen. B.* ii. p. 384 (1844); *Brehm, Vogelf.* p. 91 (1855).

Carpodacus crassirostris, *Blyth, J. A. S. Beng.* xvi. p. 476 (1847).

Bucanetes githagineus, *Cab. Mus. Hein.* Th. i. p. 164 (1850); *Loche, Expl. Sci. Algér., Ois.* i. p. 164 (1867); *Von Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 657 (1870); *Salvad. Faun. Ital., Ucc.* p. 100 (1871); *Hume, Str. F.* 1873, p. 210; *Blanf. East. Persia*, ii. p. 250 (1876); *C. Swinh. Ibis*, 1882, p. 114; *Radde, Orn. Cauc.* p. 166 (1884); *Murray, Vertebr. Faun. Sind*, p. 190 (1884); *Salvad. Elench. Ucc. Ital.* p. 179 (1887).

Carpodacus githagineus, *Brehm, Vogelf.* 1855, p. 91; *Tristr. Ibis*, 1868, p. 208; *Drake, Ibis*, 1869, p. 152; *Gray, Hand-l. B.* ii. p. 102, no. 7523 (1870); *Gurney, Ibis*, 1871, p. 294.

Propasser githaginea, *Jerd. B. Ind.* ii. p. 404 (1863).

Adult male. General colour above ashy brown tinged with rosy, the rump and upper tail-coverts pale rosy; lesser wing-coverts like the back; median, greater, and primary-coverts pale brown, edged with ashy, which is washed with pale rose-colour on the margins of the feathers, the primary-coverts with tiny white tips; bastard-wing and quills dark sepia-brown, edged with pale rose-colour; the inner secondaries brown, externally pale ashy, washed with rosy on the outer webs; all the quills tipped with whitish; tail-feathers sepia-brown, edged with rosy, whitish towards the end of the feathers; crown of head ashy brown, greyer on the forehead, which is tinged with rosy like the lores; eyelid whitish; ear-coverts, cheeks, and throat ashy brown with a gloss of hoary grey, and a tinge of rose-colour, especially on the latter; breast and abdomen a little brighter rose-colour; sides of body and flanks pale brown washed with rose-colour; thighs whitish; under tail-coverts whitish washed with rosy; under wing-coverts and axillaries pale ashy washed with rosy; quills below dusky, ashy rosy on the inner edge: "bill orange-yellow, in some (probably less mature) pale yellow, brownish on upper mandible; legs, feet, and claws fleshy brown, claws dusky, soles whitish; iris brown" (*A. O. Hume*). Total length 5·2 inches, culmen 0·4, wing 3·15, tail 1·9, tarsus 0·65.

Adult female. Only differs from the male in having less of a rosy wash on the back and underparts, the absence of this rosy tinge on the forehead and face being very perceptible. Total length 5·3 inches, culmen 0·4, wing 3·35, tail 2·9, tarsus 0·7.

The birds from Sind and Rajpootana as well as from Afghanistan

are very much paler than more western specimens, the most brilliant being an Algerian male. Egyptian specimens are, however, intermediate in this respect, but none of them show the grey on the head so distinctly as some of the Sind specimens.

Young. Is much browner than the adults, showing none of the rose-colour on the rump and upper tail-coverts, which are ochraceous brown; the wing-coverts and quills edged with ochraceous brown; sides of face and under surface of body pale ochraceous brown, without any rosy tinge, the abdomen paler and more buffy whitish.

Hab. From the countries bordering the Southern Mediteranean, eastwards through Persia and Baluchistan to Afghanistan, Sind, and Rajpootana, reaching as far as the Delhi district.

a. ♂ ad. sk.	Algeria.	M. Verreaux.
b, *c*. Ad. sk.	Ist Cataracts, Egypt, Feb. 1865 (*J. Clarke Hawkshaw*).	Gould Coll.
d. Ad. sk.	Minieh, Egypt, March 1875.	J. H. Gurney, Jun., Esq. [P.].
e, *f*. ♂ ad. sk.	Korusko desert.	Sir S. Baker [P.].
g. Juv. sk.	Near Kohrud, north of Ispahan, Persia, July 17, 1872.	W. T. Blanford, Esq. [C.].
h. ♂ ad. sk.	Near Bam, S.E. Persia, April 27, 1872.	W. T. Blanford, Esq. [C.].
i. Juv. sk.	Sir-i-jum, S.W. of Karman, S. Persia, May 29, 1872.	W. T. Blanford, Esq. [C.].
k. ♀ ad. sk.	Near Kalagan, Baluchistan, 4000 feet, March 20, 1872 (*W. T. Blanford*).	Hume Coll.
l. ♂ ad. sk.	Kandahar, Afghanistan.	Capt. Hutton [P.].
m. ♀ ad. sk.	Kandahar, Feb. 3, 1881.	Col. Swinhoe [P.].
n. ♂ ad. sk.	Pishin Valley, Sept. 26, 1881 (*Sir O. St. John*).	Hume Coll.
o. ♀ ad. sk.	Kelat-i-Ghilzai, Oct. 4, 1879 (*Sir O. St. John*).	Hume Coll.
p–*x*. ♂ sk.; *y*–*g'*. ♀ ad. sk.	Gool Mahomed, Mehur, Upper Sind, Jan. 1870, (*A. O. H.*).	Hume Coll.
h'. ♂ ad. sk.	Foot of Hills near Nyrri Nye, Sind, Jan. 26, 1872 (*A. O. H.*).	Hume Coll.
i', *k'*. Ad. sk.	Hills west of Kotree, Sind, Nov. 10, 1877.	Hume Coll.
l'. ♂ ad. sk.	South of Sehwan, Sind, Dec. 20, 1875 (*W. E. Brooks*).	Hume Coll.
m'. ♂, *n'*, *o'*, *p'*, *q'*. ♀ ad. sk.	Karachi, Sind, Dec. 1877 (*E. A. Butler*).	Hume Coll.
r'. ♀ ad. sk.	Jodhpur, Jan. 30, 1878 (*A. O. H.*).	Hume Coll.
s', *t'*. ♂ ♀ ad. sk.	Jodhpur, Feb. 21, 1876.	Hume Coll.
u'. ♂ ad. sk.	Hattin, Goorgaon district, Punjab, Dec. 10, 1877 (*E. W. Cleveland*).	Hume Coll.

2. Erythrospiza mongolica.

Carpodacus mongolicus, *Swinh. P. Z. S.* 1870, p. 447, 1871, p. 480; *Severtz. Ibis*, 1883, p. 56.

Pyrrhula incarnata (*Severtz. MSS.*); *Dode, P. Z. S.* 1871, p. 480.

Erythrospiza mongolica, *David, N. Arch. Mus.* ii. *Bull.* p. 10 (1871); *Prjev. in Rowley's Orn. Misc.* ii. p. 303 (1877); *David & Oust. Ois. Chine*, p. 349, pl. 97 (1877); *Hume, Str. F.* 1880, p. 347, note; *Barnes, t. c.* p. 457; *Homeyer & Tancré, MT. Orn. Ver. Wien*, 1883, p. 93 (1883).

Erythrospiza incarnata, *Severtz. Turkest. Jevotn.* pp. 64, 117 (1873); *id. Str. F.* 1875, p. 424; *Dresser, Ibis*, 1875, p. 245; *Scully, Str. F.* 1876, p. 169; *Gould, B. Asia*, v. pl. 30 (1877).

Bucanetes mongolicus, *Menzbier, Ibis*, 1885, p. 353.

Adult male. General colour above brown, with darker brown centres to the feathers of the mantle; lower back rather darker brown; rump rosy; lesser wing-coverts like the back; median coverts dark brown, externally ashy brown and tipped with ochreous buff; greater coverts blackish, externally ashy grey, edged with bright rose-colour; bastard-wing blackish, edged with ashy white; primary-coverts dark brown, edged with whity brown; quills dark brown, tipped with whity brown, the secondaries more broadly; first primary edged with whity brown, the rest with pale rosy; the secondaries broadly whity brown towards their base; upper tail-coverts pale ashy brown, the longer ones darker brown; tail-feathers dark brown, edged with whity brown, the outer ones conspicuously for their entire length; crown of head brown like the back, with a faint tinge of rosy over the eye; lores ashy with a rosy tinge; eyelid whitish; ear-coverts and sides of neck pale earthy brown; cheeks and under surface of body pale rosy; the breast and abdomen pale ochreous buff; sides of body and flanks pale ochreous brown, washed with rosy; thighs and under tail-coverts ochreous white; under wing-coverts and axillaries pale ochreous buff, washed with rosy, especially near the edge of the wing; quills below ashy brown, the inner edge ashy fulvous. Total length 5·5 inches, culmen 0·4, wing 3·5, tail 2·1, tarsus 0·65.

Adult female. Not so brightly coloured as the male, and having much less rose-colour on the wings and under surface of the body. Total length 5·5 inches, culmen 0·4, wing 3·5, tail 2·1, tarsus 0·65.

The *adult male in winter plumage* is not nearly so brightly coloured as in summer, and is more uniform on the back; the whitish bases to the greater coverts show with more precision and form with the light markings on the secondaries two conspicuous wing-patches; the rosy tinge on the wings and under surface of the body is much more subdued.

Hab. From Northern China and Mongolia to Turkestan, and Central Asia generally, reaching to Afghanistan and Gilgit.

a. Ad. sk.	[Central Asia.]	Gould Coll.
b. ♂ ad. sk.	Saisan, Turkestan, May 30.	Dr. O. Finsch [C.].
c, d. ♀ ad. sk.	Khokand, Oct. 4 (*Dr. Severtzoff*).	Gould Coll.
e. Ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.

f, *g*. Ad. sk.	Gilgit, Dec. 1872.	Dr. J. Scully [P.].
h, *i*, *k*. ♂ ♀ ad. sk.	Gilgit, Dec. 31, 1877 (*J. Biddulph*).	Hume Coll.
l, *m*. ♂ ♀ ad. sk.	Gilgit, Jan. 1878 (*J. Biddulph*).	Hume Coll.
n. ♂ ad. sk.	Gilgit, Feb. 4, 1878 (*J. Biddulph*).	Hume Coll.
o, *p*. ♂ ad. sk.	Gilgit, April 29, 1879 (*J. Biddulph*).	Hume Coll.
q. ♀ ad. sk.	Dunyan, Astor district, June 3, 1876 (*J. Biddulph*).	Hume Coll.
r, *s*. ♂ ♀ ad. sk.	Chaman, Southern Afghanistan, April 8, 1880 (*J. A. Murray*).	Hume Coll.
t. Ad. sk.	Kalgan, 2000 feet, "just within the outer wall of China."	Gould Coll.

37. PETRONIA.

	Type.
Petronia, *Kaup, Natürl. Syst.* p. 158 (1829)	P. petronia.
Gymnorhis, *Hodgs. in Gray's Zool. Misc.* p. 84 (1844)	P. flavicollis.
Xanthodira, *Sundev. Œfv. K. Vet.-Akad. Stockh.* 1850, p. 127	P. dentata.
Carpospiza, *Von Müller, Beitr. Orn. Afr.* pl. x. (1854)	P. brachydactyla.

Head of *Petronia petronia*.

Range. Southern Europe, extending into Central Europe, eastwards to Central Asia and Eastern Siberia as well as Northern China. Nearly the whole of India and Africa.

Key to the Species.

a. With a white spot near the end of the inner web of the tail-feathers.
  a'. With a yellow spot on the fore neck; flanks streaked with dark brown .... *petronia*, p. 289.
  b'. With no yellow on the fore neck.
    a''. Flanks heavily streaked with dark brown; back also streaked..... *petronia* juv., p. 291.
    b''. Flanks uniform; back uniform .... *brachydactyla* ♂ ♀, p. 292.
b. No white at the end of the tail-feathers.
  c'. A more or less distinct yellow spot on the fore neck.
    c''. Back uniform, not streaked with blackish centres to the feathers; no distinct eyebrow.
      a'''. Lesser wing-coverts chestnut; median coverts tipped with white; forming a wing-band ..... *flavicollis* ♂, p. 293.

b'''. Lesser wing-coverts brown; no white wing-band on the median wing-coverts ..... *pyrgita* ♂ ♀, p. 296.
d''. Back uniform brown; head dark ashy grey; eyebrow rufous, very broad.. *dentata* ♂ ♀, p. 295.
e''. Back broadly streaked with black centres to the feathers; a broad whitish eyebrow ..... *petronella* ♂ ♀, p. 297.
d'. No yellow spot on the fore neck.
f''. Lesser wing-coverts chestnut; other coverts broadly tipped with white.. *flavicollis* ♀, p. 294.
g''. All wing-coverts brown with narrow whitish tips ..... *dentata* juv., p. 296.

1. Petronia petronia.

Le Moineau fou, *Briss. Orn.* iii. p. 87 (1760).
Le Moineau de bois, *Briss. t. c.* p. 88 (1760).
Le Moineau de Bologne, *Briss. t. c.* p. 91 (1760).
Fringilla petronia, *Linn. Syst. Nat.* i. p. 322 (1766); *Temm. Man. d'Orn.* i. p. 348 (1820); *Roux, Orn. Prov.* pl. 79 (1825); *Naum. Vög. Deutschl.* iv. pl. 116. figs. 3, 4 (1826); *Werner, Atlas, Granivores*, pl. 56 (1827); *Ménétr. Cat. rais. Cauc.* p. 42 (1832); *Crespon, Orn. Gard*, p. 243 (1840); *Keys. u. Blas. Wirb. Eur.* p. xlii (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 181 (1840); *Selys-Longch. Faune Belge*, p. 75 (1842); *Mühle, Orn. Griechenl.* p. 47 (1844); *Gray, Gen. B.* ii. p. 372 (1849); *Linderm. Vög. Griechenl.* p. 62 (1860); *Schl. Dier. Nederl., Vog.* pl. 16. fig. 4 (1860); *Radde, Reis. Sibir., Vög.* p. 191 (1863); *Borggr. Vogelf. Norddeutschl.* p. 76 (1869); *Gray, Hand-l. B.* ii. p. 85, no. 7243 (1870); *Fallon, Ois. Belg.* p. 78 (1875).
La Soulcie, *Buff. Hist. Nat. Ois.* iii. p. 498 (1775).
Le Moineau des bois ou Soulcie, *Daubent. Pl. Enl.* iv. pl. 225 (fig. pess.).
Ring Sparrow, *Lath. Gen. Syn.* ii. pt. i. p. 254 (1783).
Foolish Sparrow, *Lath. t. c.* p. 255 (1783).
Speckled Sparrow, *Lath. t. c.* p. 255 (1783).
White-tailed Sparrow, *Lath. t. c.* p. 256 (1783).
Fringilla stulta, *Gm. Syst. Nat.* i. p. 919 (1788).
Fringilla bononiensis, *Gm. t. c.* p. 919 (1788).
Fringilla leucura, *Gm. t. c.* p. 919 (1788).
Passer petronia, *Koch, Syst. baier. Zool.* p. 220 (1816); *Schl. Rev. Crit.* p. 65 (1844); *id. Vog. Nederl.* pl. 163 (1854); *Wright, Ibis*, 1864, pp. 53, 292; *Degl. et Gerbe, Orn. Eur.* i. p. 247 (1867); *Smith, Ibis*, 1868, p. 445; *Doderl. Avif. Sicil.* p. 75 (1869); *Wright, Ibis*, 1870, p. 489; *David, Nouv. Arch. Mus.* vii. *Bull.* p. 10 (1871); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dresser, Ibis*, 1875, p. 240.
Coccothraustes petronia, *Cuv. Règn. Anim.* i. p. 413 (1829).
Petronia petronia, *Kaup, Natürl. Syst.* p. 158 (1829); *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Pyrgita petronia, *Brehm, Vög. Deutschl.* p. 263 (1831); *Gould, B. Eur.* iii. pl. 186 (1837); *Swinh. P. Z. S.* 1871, p. 385; *Saunders, Ibis*, 1871, p. 218; *F. Godman, Ibis*, 1872, p. 210; *Lilford, Ibis*, 1873, p. 72; *Brooke, t. c.* p. 246; *Wharton, Ibis*, 1876, p. 25; *Prjev. in Rowley's Orn. Misc.* ii. p. 288 (1877); *David & Oust. Ois. Chine*, p. 339 (1878); *Boyd. B. Cauc.* p. 61 (1879); *Radde, Orn. Cauc.* p. 178 (1884).

Pyrgita rupestris, *Brehm, Vög. Deutschl.* p. 264 (1831).

Petronia rupestris, *Bp. Comp. List B. Eur. & N. Amer.* p. 30 (1838); *Brehm, Vogelf.* p. 97 (1855); *Loche, Expl Sci. Algér., Ois.* i. p. 148 (1867).

Gymnorhis petronius, *Blyth, J. A. S. Beng.* xvi. p. 779 (1847).

Petronia stulta, *Blyth, J. A. S. Beng.* xvi. p. 880 (1847); *id. Cat. B. Mus. As. Soc.* p. 120 (1849); *Bp. Consp.* i. p. 513 (1850); *Cab. Mus. Hein.* Th. i. p. 157 (1856); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 497 (1856); *Tristr. Ibis*, 1859, p. 33; *Powys, Ibis*, 1860, p. 137; *A. Newt. Ibis*, 1863, p. 187; *Tristr. Ibis*, 1864, p. 135; *Filippi, Viagg. Persia*, p. 349 (1865); *Giglioli, Ibis*, 1865, p. 57; *Lilford, Ibis*, 1866, p. 377; *Chambers, Ibis*, 1867, p. 102; *Tristr. Ibis*, 1868, p. 204; *Saunders, Ibis*, 1869, p. 173; *Elwes & Buckley, Ibis*, 1870, p. 192; *Salvad. Faun. Ital., Ucc.* p. 148 (1871); *Hume, Str. F.* 1875, p. 218; *Irby, B. Gibr.* p. 120 (1875); *Blanf. East. Pers.* ii. p. 255 (1876); *Dresser, B. Eur.* iii. p. 607, pl. 180. fig. 2 (1877); *Danf. Ibis*, 1878, p. 22: *Biddulph, Ibis*, 1881, p. 79; *Scully, t. c.* p. 574; *C. Swinh. Ibis*, 1882, p. 113; *Salvin, Cat. Strickl. Coll.* p. 211 (1882); *Trist. Faun. & Flor. Palest.* p. 68 (1884); *Giglioli, Iconogr. Avif. Ital.* part 28 (1885); *Whitehead, Ibis*, 1885, p. 40; *Giglioli, Avif. Ital.* p. 22 (1886); *Salvad. Elench. Ucc. Ital.* p. 170 (1887).

Petronia saxorum, etc., *Brehm, Vogelf.* p. 97 (1885).

Petronia sylvestris, *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 112 (1859); *Fritsch, Vög. Eur.* tab. 24. fig. 16 (c. 1870).

? Petronia brevirostris, *Tacz. J. f. O.* 1874, p. 323; *id. Bull. Soc. Zool. France*, i. p. 179 (1876); *Homeyer, J. f. O.* 1879, p. 175.

Adult male. General colour above brown, the hind neck uniform and somewhat ashy, the mantle and back broadly streaked with black and having a whity-brown spot at the tip of the outer web, producing a strongly spotted appearance: the lower back and rump brown, with lighter brown edges to the feathers, producing a mottled appearance; upper tail-coverts brown, spotted with whity brown at the ends; lesser wing-coverts uniform brown: median and greater coverts blackish brown, margined with lighter brown, with whitish spots at the ends, forming two ill-defined wing-bars; bastard-wing, primary-coverts, and quills blackish brown, margined with paler brown, inclining to yellowish white near the base and also towards the ends of the primaries and towards the end of the secondaries, the innermost of which have whitish tips; the first primary edged with whitish; tail-feathers brown, blackish subterminally, the outer one edged with white near the base, and all of them having a large white spot at the end of the inner web, reduced in size towards the centre feathers, where it is nearly obsolete; crown of head light brown in the centre, slightly mottled with whitish tips to the feathers; the sides of the crown dark brown, followed by a broad eyebrow of whity brown, less distinct and more ashy above the lores, which are also ashy brown; eyelid and feathers below the eye whity brown; ear-coverts brown, with a dark brown streak along the upper margin; cheeks, throat, and under surface of body pale ashy brown, streaked with pale brown centres to the feathers, darker on the sides of the breast; sides of body dark brown, streaked with white centres; on the lower throat a patch of pale yellow; under tail-coverts dull white,

strongly mottled with brown bases to the feathers; axillaries and under wing-coverts white; quills ashy brown below, lighter ashy along the inner web; bill horn-brown, the basal portion of the mandible light brown; legs light brown; iris brown. Total length 6 inches, culmen 0·55, wing 3·7, tail 2·1, tarsus 0·7.

The sexes do not differ in colour, though the yellow spot on the throat is not quite so distinct in the female, which measures:— Total length 6 inches, culmen 0·55, wing 3·8, tail 2·25, tarsus 0·7.

The Eastern specimens are decidedly paler than the Western, the darkest of all being those from Teneriffe and Madeira.

The *young* birds are more uniformly brown than the adults, and are much more like a hen Domestic Sparrow; they lack the yellow spot on the throat, and are ashy whitish below, faintly streaked with pale brown.

Hab. Central and Southern Europe, of rare occurrence in Germany and Holland and the north of France; Madeira and the Canary Islands. Eastward to Central Asia, Eastern Siberia, and North China. The birds from the far east have been separated by Taczanowski as *P. brevirostris*; but whether this distinction holds good, I have not been able to determine.

a, b. ♂; *c.* ♀ ad. sk.	Orotava, Teneriffe, April 8 (*F. D. Godman*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Madeira, June 27 (*F. D. G.*).	Salvin-Godman Coll.
d'. Ad. sk.	Madeira.	Voy. H.M.S. 'Herald.'
e. Ad. sk.	Tunis.	L. Fraser [C.].
f. Ad. sk.	Tripoli.	Gould Coll.
g. ♂ ad. sk.	Granada, Spain, June 1870 (*H. S.*).	Howard Saunders, Esq. [P.].
h. ♂ ad. sk.	Jesus del Valle, Granada, June 1870 (*H. S.*).	Hume Coll.
i. ♀ ad. sk.	Granada, May 1873 (*H. S.*).	Hume Coll.
k. Ad. sk.	Gibraltar (*L. H. Irby*).	Hume Coll.
l. Ad. st.	Italy.	Purchased.
m. Ad. sk.	Rome (*P. L. Sclater*).	India Mus.
n. Ad. sk.	Milan (*P. L. Sclater*).	India Mus.
o. ♂ ad. sk.	Florence, Oct. 1885.	Prof. H. H. Giglioli [P.].
p. Ad. sk.	Tuscany.	Prof. H. H. Giglioli [P.].
q. ♂ ad. sk.	Lebanon.	Canon Tristram [C.].
r. ♀ ad. sk.	Safed, Palestine.	Canon Tristram [C.].
s. ♂ ad. sk.	Ain Fijeh, Palestine, June 11, 1864 (*H. B. T.*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Taurus, Asia Minor, April 29, 1876 (*C. G. Danford*).	Salvin-Godman Coll.
u. Ad. sk.	Erzeroum (*Dickson & Ross*).	Zool. Society [P.].
v. Ad. sk.	Persia.	Purchased.
w. Juv. sk.	Near Isfahan, March 1870.	Sir O. St. John [C.].
x. ♂ ad. sk.	N.W. of Shiraz, June 22, 1872.	W. T. Blanford, Esq. [C.].
y. ♀ ad. sk.	Karij Valley, Elburz Mountains, Aug. 17, 1872.	W. T. Blanford, Esq. [C.].
z. ♀ ad. sk.	Candahar, Dec. 1880.	Col. C. Swinhoe [P.].
a'. ♀ ad. sk.	Candahar, Feb. 15, 1881.	Col. C. Swinhoe [P.].

b'. ♀ ad. sk.	Candahar, Jan. 13, 1881.	Col. C. Swinhoe [P.].
c'. ♂ ad. sk.	Gilgit, Jan. 1877 (*J. Biddulph*).	Hume Coll.
d'. ♀ ad. sk.	Gilgit, Dec. 13, 1877 (*J. Biddulph*).	Hume Coll.

2. Petronia brachydactyla.

Petronia brachydactyla, *Bp. Consp.* i. p. 513 (1850); *Cab. Mus. Hein.* Th. i. p. 157 (1850); *Licht. Nomenel. Av. Berol.* p. 47 (1854); *Tristr. Ibis*, 1868, p. 206, pl. 6; *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 624 (1870); *Blanf. East. Persia*, ii. p. 255 (1876); *Dresser, B. Eur.* iii. p. 611, pl. 180. fig. 1 (1877); *Tristr. Faun. & Flor. Palest.* p. 69, pl. x. (1884).
Pyrenestes lacteus, *Von Müll. Naum.* i. Heft 4, p. 29 (1851).
Euplectes (?) griseus, *Heugl. Syst. Uebers.* p. 39 (1856).
Carpospiza longipennis, *Von Müll. Beitr. Orn. Afr.* pl. 10 (1854); *Bp. Rev. et Mag. de Zool.* 1855, p. 75.
Carpospiza brachydactyla, *Heugl. J. f. O.* 1863, p. 31, 1868, p. 79.
Carpospiza grisea, *Heugl. J. f. O.* 1862, p. 406.
Fringilla brachydactyla, *Gray, Hand-l. B.* ii. p. 85, no. 7247 (1870).

Adult male. General colour above uniform pale ashy brown; wing-coverts brown, edged with ashy brown, whity brown on the margins and tips; bastard-wing and primary-coverts blackish brown, fringed with lighter brown; quills dark brown, blackish towards the end, edged with pale brown, whitish on the outer primaries and secondaries; upper tail-coverts like the back, the outer ones margined with whity brown; tail-feathers pale brown, darker brown towards the end of the tail, with a white spot at the end of the inner web, becoming larger towards the outermost feather, which is also margined with white; head like the back; lores and a faint superciliary streak, as well as the cyclid, pale sandy; ear-coverts light brown; cheeks, throat, and under surface of body isabelline brown, sandy brown on the fore neck, breast, and sides of body; thighs sandy brown; under tail-coverts white, with dusky centres and darker shaft-lines; under wing-coverts and axillaries sandy brown like the breast; quills below ashy, isabelline on the inner edge: "bill and feet pale fleshy horn-colour; the lower mandible more dusky; iris dark brown" (*Heuglin*). Total length 5·6 inches, culmen 0·5, wing 3·75, tail 2·1, tarsus 0·7.

Adult female. Not perceptibly different from the male. Total length 5·35 inches, culmen 0·5, wing 2·75, tail 1·9, tarsus 0·7.

Hab. From Arabia to Palestine and thence to Persia.

a. Ad. sk.	Kashaya, Palestine, May 30, 1884 (*H. B. Tristram*).	Sharpe Coll.
b. ♂ ad. sk.	Kullas el Shukif, Palestine.	Canon Tristram [C.].
e. ♀ ad. sk.	Plain of Zebdany.	Canon Tristram [C.].
d. ♂ ad. sk.	Below the Cedars of Lebanon, June 15, 1864 (*H. B. T.*).	Salvin-Godman Coll.
e, f. ♂ ♀ ad. sk.	West of Bam, S.E. Persia, April 27, 1872.	W. T. Blanford, Esq. [C.].
g. Ad. sk.	Near Kohrud, N. of Ispahan, July 17, 1872.	W. T. Blanford, Esq. [C.].
h. ♂ juv. sk.	Shiraz, June 1869 (*Sir O. St. John*).	Hume Coll.

3. Petronia flavicollis.

Fringilla flavicollis, *Frankl. P. Z. S.* 1831, p. 120; *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 107 (1846); *id. Gen. B.* ii. p. 372 (1849); *id. Hand-l. B.* ii. p. 85, no. 7248 (1870).

Ploceus flavicollis, *Sykes, P. Z. S.* 1832, p. 94.

Gymnorhis flavirostris, *Hodgs. Icon. ined. in Brit. Mus., Passeres,* pl. 287 (no. 864); *id. in Gray's Zool. Misc.* p. 84 (1844).

Pyrgita flavicollis, *Jerd. Madr. Journ.* xi. p. 28 (1840); *Burgess, P. Z. S.* 1854, p. 160.

Gymnorhis flavicollis, *Blyth, J. A. S. Beng.* xiii. p. 948 (1844); *Bp. Consp.* i. p. 512 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 497 (1856); *Adam, Str. F.* 1873, p. 388; *James, t. c.* p. 420; *Hume, Nests & Eggs Ind. B.* p. 401 (1873); *Ball, Str. F.* 1874, p. 421; *Blanf. East. Persia,* ii. p. 256 (1876); *id. Str. F.* 1877, p. 249; *Hume, t. c.* p. 329; *Davidson & Wenden, Str. F.* 1878, vol. ii. p. 85; *Butler, t. c.* p. 184; *Ball, t. c.* p. 223; *Hume, Str. F.* 1879, p. 107; *Doig, t. c.* p. 371; *Butler, Cat. B. Sind,* p. 47 (1879); *id. Cat. B. S. Bomb. Pres.* p. 62 (1880); *Vidal, Str. F.* 1880, p. 72; *Butler, t. c.* p. 416; *Reid, Str. F.* 1881, p. 56; *Davison, Str. F.* 1883, p. 403; *C. Swinh. & Barnes, Ibis,* 1885, p. 129; *Sharpe, Ibis,* 1886, p. 497.

Petronia flavicollis, *Blyth, Cat. B. Mus. As. Soc.* p. 120 (1849); *Irby, Ibis,* 1861, p. 231.

Gymnorhis xanthosterna, *Bp. Consp.* i. p. 512 (1850).

Pyrgita xanthosterna, *Licht. Nomencl. Av. Berol.* p. 47 (1854).

Passer flavicollis, *Jerd. B. Ind.* ii. p. 368 (1863); *Blyth, Ibis,* 1867, p. 42; *Beavan, Ibis,* 1868, p. 174; *Hayes Lloyd, Ibis,* 1873, p. 414; *Cock & Marsh. Str. F.* 1873, p. 357; *Butler, Str. F.* 1875, p. 497; *Brooks, t. c.* p. 254; *Butler, Str. F.* 1876, p. 35; *Fairb. t. c.* p. 261; *Legge, B. Ceylon,* p. 605 (1879); *Salvin, Cat. Strickl. Coll.* p. 210 (1882); *Marshall, Ibis,* 1884, p. 419; *Sharpe, Ibis,* 1886, p. 486.

Xanthodina flavicollis, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 627, note (1870).

Adult male. General colour uniform ashy brown; scapulars like the back; lesser wing-coverts bright chestnut; median coverts dusky brown, broadly tipped with white, forming a wing-bar; greater series dusky brown, edged with ashy brown, whitish at the ends, forming a narrower wing-bar; bastard-wing and primary-coverts deep sepia-brown, obsoletely fringed with paler brown; quills and tail-feathers dark sepia-brown, edged with whity brown, the outer tail-feathers fringed with whitish round the tips of the inner web; head uniform with the back, a little lighter ashy brown over the eye, forming an indistinct eyebrow; lores and eyelid dusky; cheeks and ear-coverts ashy brown, the latter slightly darker brown on their upper parts; chin and upper throat dull whitish, the lower throat occupied with a conspicuous yellow spot; fore neck, breast, and sides of body light ashy brown; thighs ashy brown; centre of abdomen and under tail-coverts white; axillaries whity brown; under wing-coverts dull white; quills dusky below, ashy along the inner web: "bill black; legs cinereous brown; iris brown" (*Jerdon*). Total length 5 inches, culmen 0·5, wing 3·2, tail 2·1, tarsus 0·6.

The *adult male in winter plumage* is a trifle browner than in

summer, and the white wing-bands are slightly shaded with brown; otherwise as in summer. The bill is yellowish brown in winter, instead of black.

Specimens from Southern India are rather darker than those from North-western India, and those from Baluchistan and Persia are still paler.

Adult female. Much browner than the male and distinguished by the smaller size of the yellow spot on the throat, the lesser wing-coverts being chestnut-brown instead of bright chestnut. Total length 5 inches, culmen 0·55, wing 3·05, tail 1·9, tarsus 0·6.

Hab. From Persia and Baluchistan to Sind and the plains of the Indian Peninsula generally, extending into the hills in some places.

a. ♂ ad. sk.	Shiraz, Persia, June 1870.	Sir O. St. John [C.].
b, c. ♂ ♀ ad. sk.	Bushire, April 1885.	A. J. V. Palmer, Esq. [P.].
d, e, f, g. Ad. sk.	Fao, Persian Gulf.	W. D. Cumming, Esq. [P.].
h. ♀ ad. sk.	Near Aftar, east of Bampur, Baluchistan, March 30, 1872 (*W. T. Blanford*).	Hume Coll.
i. ♀ ad. sk.	Near Aftar, March 31.	W. T. Blanford, Esq. [C.].
k. ♂ ad. sk.	Ispadan, east of Bampur, March 30, 1872.	W. T. Blanford, Esq. [C.].
l. ♂ ad. sk.	Candahar, May 13, 1879 (*Sir O. St. John*).	Hume Coll.
m. ♂ ad. sk.	Near Daidabad, May 3, 1871.	Hume Coll.
n, o. ♂ ♀ ad. sk.	Sehwan, Sind, April 17, 1873 (*W. E. Brooks*).	Hume Coll.
p. ♂; *q, r.* ♀ ad. sk.	Hyderabad, Sind, May 1878 (*E. A. Butler*).	Hume Coll.
s. ♀ ad. sk.	Cutch, Feb. 1872.	Hume Coll.
t, u. Ad. sk.	Mount Abu, 1870 (*Dr. Newman*).	Hume Coll.
v. ♂ ad. sk.	Gurgaon, Delhi, Feb. 28, 1881 (*W. N. Chill*).	Hume Coll.
w. ♀ ad. sk.	Goordaspur, May 10, 1870.	Hume Coll.
x. ♀ ad. sk.	Umbala, Nov. (*R. C. Beavan*).	Gould Coll.
y, z. ♂ ♀ ad. sk.	Dhunda, Baghirati Valley, May 27, 1874 (*W. E. Brooks*).	Hume Coll.
a'. Ad. sk.	Saharunpur (*Falconer*).	India Museum.
b', c'. ♂ ♀ ad. sk.	Etawah.	Hume Coll.
d'. Ad. sk.	Etawah, Aug. 30, 1865.	Hume Coll.
e', f'. ♂ ♀ ad. sk.	Etawah, Oct. 1865.	Hume Coll.
g'. ♂ ad. sk.	Jhansi, N. W. P., May 9, 1868.	Hume Coll.
h'. ♂ ad. sk.	Bundelkund, Jan. 8 (*G. F. L. Marshall*).	R. B. Sharpe, Esq. [P.].
i', k'. Ad. sk.	Lucknow.	Colonel Way [P.].
l'. ♀ ad. sk.	Sultanpur, Oudh, Feb. 1873.	Hume Coll.
m', n'. ♂; *o'.* ♀ ad. sk.	Lallgunj, April 23, 1869 (*R. M. Adam*).	Hume Coll.

p'. ♂ ad. sk.	Allahabad, Feb. 2, 1873.	Hume Coll.
q'. ♂ ad. sk.	Phorlpur, near Allahabad, Feb. 7, 1880.	Hume Coll.
r'. ♀ ad. sk.	Mogulserai, Jan. 1874 (*W. E. Brooks*).	Hume Coll.
s', *t'*. Ad. st.	Behar.	Hodgson Coll.
u', *v'*. ♂ ♀ ad. sk.	Assensole, Feb. 7, 1873 (*W. E. Brooks*).	Hume Coll.
w'. ♂ ad. sk.	Lohardugga, Dec. 28, 1877.	Hume Coll.
x'. Ad. sk.	Midnapur (*R. C. Tytler*).	India Museum.
y'. ♂ ad. sk.	Chanda, Jan. 1870.	Hume Coll.
z'. ♂ ad. sk.	Sambulpur, Dec. 18, 1876.	Hume Coll.
a, *β*. ♂ ♀ ad. sk.	Seoni, C. Prov.	Hume Coll.
γ, *δ*. ♂ ♀ ad.; *ε*. Juv. sk.	Saugor, C. Prov.	Hume Coll.
ζ. ♂ ad. sk.	Mhow, March 23.	Col. C. Swinhoe [P.].
η. ♂ ad. sk.	Mhow, Oct. 23.	Col. C. Swinhoe [P.].
θ, *ι*. ♂ ♀ ad. sk.	Nandurbar, Khandeish, April 7, 1881 (*J. Davidson*).	Hume Coll.
κ. ♀ ad. sk.	Nandurbar, Dec. 15, 1880 (*J. D.*).	Hume Coll.
λ. ♂ imm. sk.	Mahabaleshwur Hills, April 29, 1872 (*S. B. Fairbank*).	Hume Coll.
μ, *ν*. ♂ ♀ ad. sk.	Belgaum, Jan. 1880 (*E. A. Butler*).	Hume Coll.
ξ. Ad. sk.	Malabar.	Gould Coll.
o. ♂ ad. sk.	Muddur, Mysore, Feb. 25, 1883.	W. Davison, Esq. [P.].
π. ♂ juv. sk.	Gundalupet, Mysore, May 23, 1881 (*W. D.*).	Hume Coll.
ρ, *σ*. Ad. sk.	Anjango, Travancore.	Hume Coll.

4. Petronia dentata.

Xanthodira dentata, *Sunder. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 127; *Heugl. J. f. O.* 1868, p. 81; *id. Orn. N.O.-Afr.* i. pt. 2, p. 625, tab. 21. fig. 1 (1870); *Finsch, Tr. Z. S.* vii. p. 289 (1870).
Petronia dentata, *Bp. Consp.* i. p. 513 (1850); *Hartl. Orn. W.-Afr.* p. 274, App. (1854).
Pyrgita nigripes, *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Fringilla (Passer) lunatus, *Heugl. Syst. Uebers.* p. 42 (1856).
Petronia albigularis, *Brehm, Naum.* 1856, p. 377.
Passer canicapillus, *Blyth, Ibis*, 1866, p. 46.
Pyrgita fazoglensis, *Heugl. J. f. O.* 1867, p. 269 (*ex Württ. MSS.*).
Xanthodina albigularis, *Heugl. J. f. O.* 1868, p. 82.
Xanthodina canicapilla, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 627, note (1870).
Passer (Gymnorhis) canicapillus?, *Blanf. Geol. & Zool. Abyss.* p. 412 (1870).
Passer dentatus, *Blyth, Ibis*, 1870, p. 172.
Fringilla dentata, "*Sund.*," *Gray, Hand-l. B.* ii. p. 84, no. 7245 (1870).
Fringilla albogularis, *Gray, t. c.* p. 85, no. 7246 (1870).
Fringilla dentata, "*Bp.*" (!), *Gray, t. c.* p. 85, no. 7249 (1870).
Gymnorhis dentata, *Sharpe, Cat. Afr. B.* p. 69 (1871).

Adult female. General colour above chocolate-brown from the

nape to the rump; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with lighter brown and whity brown at the ends; bastard-wing and primary-coverts uniform dark brown; quills dark brown, edged with chocolate-brown, whity brown on the margins of the primaries and ends of secondaries; upper tail-coverts dark brown, edged with paler brown; tail-feathers dark brown, edged and fringed at the tips with paler brown; crown of head dark ashy grey, contrasting with the back; lores whitish, continued into a broad eyebrow of dull rufous-brown, like the sides of the neck; ear-coverts and cheeks dark ashy brown; throat whitish, followed by a half-concealed spot of pale sulphur-yellow; fore neck, breast, sides of body, and flanks dark ashy brown, clearer brown on the latter; lower breast, abdomen, and thighs whitish; under tail-coverts white; under wing-coverts and axillaries ashy brown; quills below dusky, ashy along the inner web: "bill blackish horn-colour, the base of the lower mandible dusky fleshy: feet lead-colour; iris rufous-umber" (*Heuglin*). Total length 4·5 inches, culmen 0·5, wing 3·2, tail 1·8, tarsus 0·7.

The sexes, as determined by Mr. W. T. Blanford, are alike. Von Heuglin, however, describes the female as more fulvescent in colour than the male, the cheeks, breast, and flanks washed with fulvous; wing-coverts more conspicuously tipped with buffy white; inner secondaries and primaries margined with fulvous; a conspicuous broad superciliary streak of buffy whitish, reaching to the nape; the yellow spot on the throat very slightly developed; bill pale fulvous horn-colour.

Young birds lack the yellow spot on the throat, have the head brown like the back, which shows traces of dark-brown Sparrow-like centres to the feathers; the eyebrow very broad and pale creamy buff.

Hab. N.E. Africa generally.

a. Juv. sk.	Abyssinia.	Christiania Museum [P.].
b. ♀ juv. sk.	Gelamet, Bogos Land, Aug. 10, 1868 (*W. Jesse*).	Sharpe Coll.
c. ♀ ad. sk.	Anseba valley, July 31, 1868.	W. T. Blanford, Esq. [P.].
d,e. ♂ ♀ ad. sk.	Rairo, Aug. 15, 1868.	W. T. Blanford, Esq. [P.].

5. Petronia pyrgita.

Xanthodina pyrgita, *Heugl. J. f. O.* 1862, p. 30, 1868, p. 80; *id. Orn. N.O.-Afr.* i. pt. 2, p. 627, pl. xxi. fig. 2 (1870).
Passer (Gymnorhis) pyrgita, *Blanf. Geol. & Zool. Abyss.* p. 413 (1870).
Fringilla pyrgita, *Gray, Hand-l. B.* ii. p. 85, no. 7250 (1870).
Xanthodira pyrgita, *Fischer, Zeitschr. ges. Orn.* i. p. 321 (1884).

Adult. Differs from *P. dentata* in being perfectly uniform brown above, with the head like the back; no rufous eyebrow; bill larger and slightly more curved. Total length 5·8 inches, culmen 0·55, wing 2·95, tail 2·1, tarsus 0·7.

I was rather inclined to regard this as the winter plumage of *P. dentata*; but its larger size appears to determine its specific distinctness.

Hab. Abyssinia and Bogos Land in N.E. Africa to the Pangani River in East Africa.

a, *b*. Ad.; *c*. Juv. sk.	Eylet, Bogos (*Esler*).	Sharpe Coll.
d. ♀ ad. sk.	Lower Sooroo, Feb. 16, 1868.	W. T. Blanford, Esq. [C.].

6. Petronia petronella.

Fringilla petronella, *Licht.*; *Gray, Hand-l. B.* ii. p. 84, no. 7244 (1870).
Gymnorhis superciliaris, *Blyth, J. A. S. Beng.* xiv. p. 553 (1845, *ex A. Hay, MSS.*); *Bp. Consp.* i. p. 512 (1850).
Petronia superciliaris, *Blyth, J. A. S. Beng.* xvi. p. 880 (1847).
Fringilla superciliaris, *Gray, Gen. B.* ii. p. 372 (1849).
Xanthodira flavigularis, *Sundev. Öfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 98.
Petronia petronella, *Bp. Consp.* i. p. 513 (1850); *Licht. Nomencl. Av. Berol.* p. 47 (1854); *Sharpe, Cat. Afr. B.* p. 69 (1871); *Gurney, in Anderss. B. Damara-land*, p. 186 (1872); *Ayres, Ibis*, 1880, p. 108, 1884, p. 203; *Sharpe, ed. Layard's B. S. Afr.* pp. 481, 850 (1884).
Xanthodina petronoides, *Cab. Mus. Hein.* Th. i. p. 157 (1850).
Fringilla humilis, *Bp. Consp.* i. p. 511 (1850).
Pyrgita humilis, *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Xanthodina petronella, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 627, note (1870).
Xanthodina superciliaris, *Heugl. t. c.* p. 627, note (1870).
Passer humilis, *Gray, Hand-l. B.* ii. p. 86, no. 7276 (1870).
Xanthodira flavigula, *Bocage, Orn. Angola*, p. 365 (1881).
Petronia flavigula, *Shelley, Ibis*, 1882, p. 357.

Adult male. General colour above brown, mottled on the back and mantle with black centres to the feathers, which have also margins of dull whity brown; hind neck uniform dark brown; lower back and scapulars uniform brown, the rump and upper tail-coverts rather more ashy brown; lesser wing-coverts uniform brown; median and greater coverts sepia-brown, tipped with pale fawn-buff, whiter at the end of the greater coverts; bastard-wing, primary-coverts, and quills dark sepia-brown, the two former fringed, the latter margined with pale reddish brown, whitish round the ends of the secondaries, which are margined with paler rufous, the primaries margined with ashy whitish about one third from the end of the feather; tail-feathers sepia-brown, edged with whity brown; crown of head dark brown, with a broad superciliary streak of creamy white, reaching from above the eye to the sides of the nape; lores dusky brown, with a pale whity brown line above the latter; ear-coverts and cheeks brown, whity brown on the lores, eyelid, and feathers below the eye; above the ear-coverts a broad streak of dark brown, behind the cheeks a small patch of whity brown; under surface of body brown, with a spot of bright yellow on the lower throat; the centre of the abdomen dull whitish, the under tail-coverts purer white; sides of body, flanks, and thighs darker brown; axillaries and under wing-coverts pale fawn-brown, the longer coverts whitish; quills dusky below, ashy along the edge of the

inner web. Total length 6·2 inches, culmen 0·65, wing 3·8, tail 2·35, tarsus 0·8.

In *winter plumage* the colours are somewhat intensified, and the mottling on the back more pronounced, with broader and more distinct paler brown margins to the feathers. During the breeding-plumage the colours become washed out and the feathers abraded, the throat somewhat whitish.

The specimen from the Zambesi is decidedly smaller and purer in colour, especially as regards the white on the abdomen and under tail-coverts: wing 3·2 inches. The Natal birds are somewhat intermediate in size: wing 3·3–3·45 inches.

Adult female. Only to be distinguished from the male by the smaller size of the yellow spot on the throat, and by the somewhat smaller dimensions. Total length 6 inches, culmen 0·6, wing 3·55, tail 2·25, tarsus 0·8.

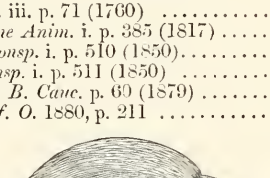
Young. Similar to the adult female, but paler brown, and having the yellow spot on the throat scarcely distinguishable.

Hab. South-eastern Africa to the Zambesi on the east, and Damara-land on the west.

a–c. Ad.; *d.* Juv. sk.	South Africa.	Sir A. Smith [C.].
e. ♀ ad. sk.	Eland's Post, S.E. Africa, April 30 (*T. C. Atmore*).	Sharpe Coll.
f, g. ♀ ad. sk.	Eland's Post, June 1870 (*T. C. Atmore*).	Sharpe Coll.
h. ♂ ad. sk.	Eland's Post, August (*T. C. Atmore*).	Sharpe Coll.
i. ♀ ad. sk.	Haugmau's Bush, Kingwilliamstown, June 25, 1877 (*C. Newby*).	Capt. Trevelyan [P.].
k, l. ♂ ♀ ad. sk.	Pinetown, Natal, Oct. 23 (*T. L. Ayres*).	Sharpe Coll.
m, n. ♂ ♀ ad. sk.	Pinetown, July (*T. L. Ayres*).	Sharpe Coll.
o. Ad. sk.	Tete, Zambesi.	Sir J. Kirk [C.].
p, q. ♀ imm. sk.	Elephant Vley, Damara-land, Aug. 4 (*C. J. Andersson*).	Sharpe Coll.

38. PASSER.

	Type.
Passer, *Briss. Orn.* iii. p. 71 (1760)	P. domesticus.
Pyrgita, *Cuv. Règne Anim.* i. p. 385 (1817)	P. domesticus.
Pyrgitopsis, *Bp. Consp.* i. p. 510 (1850)	P. simplex.
Corospiza, *Bp. Consp.* i. p. 511 (1850)	P. lichtensteini.
Salicipasser, *Bogd. B. Canc.* p. 60 (1879)	P. montanus.
Sorella, *Hartl. J. f. O.* 1880, p. 211	P. emini.



Head of *Passer domesticus*.

Range. The greater part of the Old World excepting the Moluccan subregion and the Australian Region. Absent in the New World, but has been introduced in many places.

Key to the Species.

a. With the throat black.
a'. Back streaked or mottled with black; crown uniform.
a''. Lesser wing-coverts uniform brown; head chocolate; ear-coverts ashy whitish, with a black patch on the lower part ..... { *montanus*, p. 301. / *saturatus*, p. 307.
b''. Lesser wing-coverts uniform chestnut.
a'''. With the crown ashy or dark grey.
*a*⁴. Lower back and rump uniform ashy brown, with no chestnut.
*a*⁵. Sides of neck and a broad superciliary streak deep chestnut; feathers below the eye black; ear-coverts and sides of face ashy or white ..... *domesticus* ♂, p. 309.
*b*⁵. Sides of neck and eyebrow tawny rufous; feathers below the eye and upper part of ear-coverts black; remainder of ear-coverts white.
*a*⁶. Larger: wing 3·05 inches; no yellow on sides of neck .... *insularis* ♂, p. 321.
*b*⁶. Smaller: wing 2·3 inches; a yellow patch on the sides of the neck.
*a*⁷. No yellow on abdomen.... *moabiticus* ♂, p. 321.
*b*⁷. Abdomen yellowish ..... *yatii* ♂, p. 322.
*b*⁴. With chestnut on the lower back and rump.
*c*⁵. Upper tail-coverts ashy, with dusky centres.
*c*⁶. Crown blackish, contrasting with the grey hind neck; sides of crown light tawny ..... *jagoensis* ♂, p. 323.
*d*⁶. Crown light grey, uniform with the hind neck; sides of crown deep chestnut ..... *pyrrhonotus* ♂, p. 316.
*d*⁵. Upper tail-coverts chestnut, externally dusky brown; head ashy grey like the hind neck ..... { *motitensis*, p. 324. / *ruficinctus*, p. 325.
b'''. Crown chestnut.
*c*⁴. Flanks uniform.
*e*⁵. Rump uniform chestnut; under surface sulphur-yellow; ear-coverts yellow ..... *cinnamomeus* ♂, p. 326.
*f*⁵. Rump greenish olive-grey; under surface pale yellowish; ear-coverts yellow..... *castanopterus* ♂, p. 328.

g^5. Rump ashy brown; no yellow on the under surface; ear-coverts dull white ..... *italiæ* ♂, p. 315.
d^4. Flanks streaked with black ..... *hispaniolensis* ♂, p. 317.
c''. Lesser wing-coverts black; crown black; sides of hinder crown and sides of neck uniform tawny ..... *ammodendri* ♂, p. 337. *timidus* ♂, p. 339.
b'. Back and rump uniform, not streaked.
d''. With chestnut on the upper surface.
c'''. Crown black; mantle ashy; ear-coverts and cheeks black ..... *arcuatus* ♂, p. 333.
d'''. Crown chestnut; rump chestnut.
e^1. Black of throat confined to the throat itself; median wing-coverts rufescent at ends ..... *rutilans* ♂, p. 329.
f^1. Black of throat extending to breast; median wing-coverts tipped with white ..... *assimilis* ♂, p. 330.
e'''. Crown olive-greenish like the rump *flaveolus* ♂, p. 330.
e''. No chestnut on the upper surface, which is creamy white; lores and feathers round the eye black ..... *simplex* ♂, p. 339.
b. With the throat not black.
c'. Back streaked or mottled with black; a pale superciliary streak.
f''. Rump pale ashy brown.
f'''. No yellow spot on the sides of the neck.
g^1. Cheeks dingy brown like the ear-coverts ..... *domesticus* and allies, ♀, p. 310.
h^1. Cheeks white like the lower part of the ear-coverts.
h^5. Much larger: wing 2·9–3·05 inches; median wing-coverts narrowly tipped with white .. *insularis* ♀, p. 321.
i^5. Smaller: wing 2·6 inches; median wing-coverts white for their terminal half ..... *pyrrhonotus* ♀, p. 317.
g'''. A spot of pale yellow on the sides of the neck ..... *moabiticus* ♀, p. 322.
g''. Rump rufous or chestnut, contrasting with the striped back.
h'''. Throat chestnut like the upper surface ..... *emini* ♂ juv. et ♀ ad., p. 332.
i'''. With yellow on the throat.
i^4. Head dark brown, with a broad yellowish-buff eyebrow; a blackish streak along the top of the ear-coverts ..... *cinnamomeus* ♀, p. 326.
k^4. Head pale reddish brown, slightly contrasting with the back; a narrow yellow eyebrow; no blackish streak along the top of the ear-coverts ..... *luteus* ♀, p. 326.
k'''. Throat whitish or ashy.
l^4. Larger: wing 3·25 inches ..... *motitensis* ♀, p. 325.
m^4. Smaller: wing 2·3 inches ..... *jagoensis* ♀, p. 323.

d'. Back uniform, not streaked or mottled with black.
h''. No yellow on the under surface.
l'''. Head ashy; rump chestnut.
*n*⁴. A broad whitish superciliary streak *arcuatus* ♀, p. 333.
*o*⁴. No light superciliary streak..... *diffusus* and allies, p. 336.
m'''. Head pale tawny, or deep isabelline like the back ..... *simplex* ♀, p. 340.
n'''. Head uniform chestnut like the back ..... *emini* ♂, p. 332.
i''. With yellow on the under surface.
o'''. Head bright yellow.
*p*⁴. Back chestnut ..... *luteus* ♂, p. 340.
*q*⁴. Back yellow ..... *euchlorus* ♂, p. 341.
p'''. Head ashy brown, with a tinge of yellow; throat pale yellowish .... *flaveolus* ♀, p. 331.
q'''. Head pale tawny; back grey; throat white; fore neck yellow..... *euchlorus* ♀, p. 342.

1. Passer montanus.

The Hamburgh Tree-Creeper, *Albin, Nat. Hist. B.* iii. p. 23, pl. 24 (1740).
The Red-head Sparrow, *Albin, t. c.* p. 61, pl. 65 (1740).
Mountain Sparrow, *Albin, t. c.* p. 62, pl. 66 (fig. pess.).
Mountain Sparrow, Cock and Hen, *Edwards, Gleanings,* ii. p. 124, pl. 269 (1760).
Le Moineau de Montagne, *Briss. Orn.* iii. p. 79 (1760).
Le Moineau de Campagne ou Le Friquet, *Briss. t. c.* p. 82 (1760).
Le Bouvreuil de Hamburg, *Briss. t. c.* p. 314 (1760).
Fringilla montana, *Linn. Syst. Nat.* i. p. 324 (1766); *Temm. Man. d'Orn.* i. p. 354 (1820); *Roux, Orn. Prov.* pl. 83 (1825); *Naum. Vög. Deutschl.* iv. pl. 116. figs. 1, 2 (1826); *Werner, Atlas, Granivores,* pl. 42 (1827); *Crespon, Orn. Gard,* p. 248 (1840); *Yarr. Brit. B.* i. p. 469 (1843); *Kjærb. Danm. Fugle,* pl. xxvi. fig. 5 (1852); *Sundev. Svensk. Fogl.* pl. v. fig. 7 (1856); *Schl. Dier. Nederl., Vog.* pl. 16. fig. 3 (1861); *Fallon, Ois. Belg.* p. 99 (1875).
Le Friquet, *Buff. Hist. Nat. Ois.* iii. p. 489 (1775); *Daubent. Pl. Enl.* iv. pl. 267. fig. 1.
L'Hambouroux, *Montb. Hist. Nat. Ois.* iv. p. 398 (1778).
Tree Finch, *Lath. Gen. Syn.* ii. pt. 1, p. 252 (1783).
Loxia hamburgia, *Gm. Syst. Nat.* i. p. 854 (1788).
Fringilla campestris, *Schrank, Fauna Boica,* p. 181 (1798).
Passer montanina, *Pall. Zoogr. Rosso-Asiat.* ii. p. 30 (1811).
Passer hamburgensis, *Leach, Syst. Cat. Mamm. &c. Brit. Mus.* p. 14 (1816).
Passer montanus, *Koch, Syst. baier. Zool.* p. 219 (1816); *Macgill. Brit. B.* i. p. 351 (1837); *Keys. u. Blas. Wirb. Eur.* p. xxxix (1840); *Mühle, Orn. Griechenl.* p. 44 (1844); *Schl. Rev. Crit.* p. lxiv (1844); *Rüpp. Syst. Uebers.* p. 78 (1845); *Gray, Gen. B.* ii. p. 372 (1849); *Blyth, Cat. B. Mus. As. Soc.* p. 120 (1849); *Bp. Consp.* i. p. 508 (1850); *Cab. Mus. Hein.* Th. i. p. 156 (1850); *Middend. Reis. Sibir., Zool.* p. 148 (1851); *Schl. Vog. Nederl.*

pl. 162 (1854); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 500 (1856); *Hewits. Eggs Brit. B.* i. p. 153, pl. 42. figs. 1, 2 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 131 (1859); *Schrenck, Reis. Amurl.* p. 289 (1859); *Tristr. Ibis*, 1859, p. 33; *Swinh. Ibis*, 1860, p. 61; *Powys, t. c.* p. 137; *Linderm. Vög. Griechenl.* p. 56 (1860); *Swinh. Ibis*, 1861, pp. 45, 255; *Blyth, t. c.* p. 408; *Swinh. Ibis*, 1862, p. 258; *Blakist. t. c.* p. 327; *Gray, List Brit. B.* p. 100 (1863); *Jerd. B. Ind.* ii. p. 366 (1863); *Radde, Reis. Sibir., Vög.* p. 181 (1863); *Swinh. Ibis*, 1863, p. 378; *Wright, Ibis*, 1864, p. 53; *Schomb. t. c.* p. 256; *Giglioli, Ibis*, 1865, p. 57; *More, t. c.* p. 126; *Swinh. Ibis*, 1866, p. 401; *Beavan, t. c.* p. 419, 1867, p. 138; *Degl. & Gerbe, Orn. Eur.* i. p. 246 (1867); *Whitely, Ibis*, 1867, p. 202; *Beavan, Ibis*, 1868, p. 174; *Bulger, Ibis*, 1869, p. 169; *Swinh. t. c.* p. 348; *Borggr. Vogelf. Norddeutschl.* p. 73 (1869); *Dodrl. Avif. Sicil.* p. 75 (1869); *Swinh. Ibis*, 1870, pp. 79, 354; *Elwes & Buckley, t. c.* p. 192; *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 632 (1870); *Gray, Hand-l. B.* ii. p. 86, no. 7258 (1870); *Gould, B. Gt. Brit.* iii. pl. 33 (c. 1870); *Fritsch, Vög. Eur.* tab. 20. fig. 13 (c. 1870); *Saunders, Ibis*, 1871, p. 218; *Swinh. P. Z. S.* 1871, p. 386; *R. Gray, B. West Scotl.* p. 140 (1871); *Harting, Handb. Brit. B.* p. 28 (1872); *Shelley, B. Egypt*, p. 150 (1872); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Alst. & Harvie Brown, Ibis*, 1873, p. 64; *Brooks, t. c.* p. 246; *Swinh. t. c.* p. 371; *Hume, Nests and Eggs Ind. B.* p. 400 (1873); *id. & Henders. Lahore to Yark.* p. 254 (1873); *Hume, Str. F.* 1874, p. 481, 1875, p. 175; *Irby, B. Gibr.* p. 119 (1875); *Dresser, B. Eur.* iii. p. 597, pl. 178 (1875); *Blyth, B. Burm.* p. 94 (1875); *Swinh. Ibis*, 1875, p. 120; *Dresser, t. c.* p. 239; *Danf. & Harvie Brown, t. c.* p. 312; *Newt. ed. Yarr. Brit. B.* i. p. 82 (1876); *Blanf. East. Persia*, ii. p. 255 (1876); *Scully, Str. F.* 1876, p. 165; *Hume, t. c.* p. 499; *Tacz. Bull. Soc. Zool. France*, i. p. 178 (1876); *Seebohm & Harvie Brown, Ibis*, 1876, p. 114; *Oates, Str. F.* 1877, p. 163; *Prjev. in Rowley's Orn. Misc.* ii. p. 294 (1874); *David & Oust. Ois. Chine*, p. 340 (1877); *Swinh. Ibis*, 1877, p. 145; *Seebohm, Ibis*, 1878, p. 334; *Anders. Zool. Exped. Yun-nan*, p. 601 (1878); *Hume & Davison, Str. F.* 1878, pp. 407, 520; *Tiraud, Bull. Com. Agric. Cochinchine*, i. p. 132 (1879); *Finsch, MT. zool.-bot. Gesellsch. Wien*, 1879, p. 210; *Hume, Str. F.* 1879, pp. 67, 107; *Scully, t. c.* p. 334; *Wardlaw-Ramsay, Ibis*, 1880, p. 64; *Danf. t. c.* p. 94; *St. John, t. c.* p. 145; *Seebohm, t. c.* p. 187; *Bingham, Str. F.* 1880, p. 193; *Barnes, t. c.* pp. 218, 456; *Kelham, Ibis*, 1881, p. 524; *Giglioli, Iconogr. Avif. Ital.* pt. 10 (1881); *C. Swinh. Ibis*, 1882, p. 113; *Seebohm, t. c.* pp. 218, 378; *Blakist. & Pryer, B. Japan*, p. 178 (1882); *Salvin, Cat. Strickl. Coll.* p. 210 (1882); *Seebohm, Ibis*, 1883, p. 9; *Dalgl. t. c.* p. 564; *Oates, B. Brit. Burm.* i. p. 348 (1883); *B. O. U. List Brit. B.* p. 51 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 89; *Clarke, Ibis*, 1884, p. 143; *Saunders, t. c.* p. 375; *C. H. T. Marshall, t. c.* p. 419; *Booth, Rough Notes*, pt. vii. (1884); *Seebohm, Hist. Brit. B.* ii. p. 69 (1884); *Radde, Orn. Cauc.* p. 187 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 345 (1884); *Dixon, Ibis*, 1885, p. 82; *Giglioli, Avif. Ital.* p. 23 (1886); *Salvad. Elench. Uce. Ital.* p. 169 (1887).

Pyrgita montana, *Cuv. Règne Anim.* i. p. 385 (1817); *Gould, B. Eur.* iii. pl. 184 (1837); *Bp. Comp. List B. Eur. and N. Amer.* p. 31 (1838); *Selys-Longch. Faun. Belge*, p. 80 (1842); *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 285. fig. 2, no. 479; *id. in Gray's*

Zool. Misc. p. 84 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 107 (1846); *Licht. Nomencl. Av. Berol.* p. 47 (1854); *Filippi, Viagg. Persia,* p. 349 (1865); *Bettoni, Uec. nidif. Lomb.* i. pl. 9 (1865); *Loche, Expl. Sci. Algér., Ois.* i. p. 136 (1857).

Pyrgita campestris, *Brehm, Vög. Deutschl.* p. 267 (1831).

Pyrgita septentriona is, *Brehm, t. c.* p. 258 (1831).

Passer arboreus, *Blyth in Rennie's Field Naturalist,* i. p. 467 (1833).

Fringilla compestris, *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 180 (1840).

Salicipasser montanus, *Boyd. B. Cauc.* p. 60 (1879).

Adult male. General colour above fawn-colour, the feathers of the mantle with ashy-fulvous edgings and broad black streaks; lower back, rump, and upper tail-coverts uniform ashy brown, with a slight wash of fulvous or tawny; lesser wing-coverts uniform chestnut; median series black with broad white tips, forming a wing-bar; greater series dusky blackish, edged with pale rufous-brown and whitish at the ends; bastard-wing and primary-coverts dusky, fringed with rufous-brown; quills dusky blackish, edged with rufous-brown, the primaries conspicuously pale rufous near the base of the outer web, the pale margin also widening slightly towards the end of the feather; tail-feathers brown, edged with ashy; crown of head and nape vinous chocolate; lores and eyelid blackish, as also the feathers at the base of the cheeks; the latter white, as well as the ear-coverts, the latter with a black line along the upper edge continued beneath the eye, and having also a large black patch on the hinder part of the lower ear-coverts; sides of neck white; throat and fore neck black; remainder of under surface of body pale ashy, the sides of the body, flanks, and thighs brown, the abdomen whiter; under tail-coverts white, with pale brown bases, the long ones pale brown with whitish tips; axillaries and under wing-coverts very pale fawn-colour; quills dusky below, pale ashy rufous along the edge of the inner web; bill black; legs light brown; iris brown. Total length 5·6 inches, culmen 0·45, wing 2·75, tail 2, tarsus 0·7.

Adult female. Similar to the male. Total length 5·2 inches, culmen 0·45, wing 2·65, tail 2·05, tarsus 0·7.

There is scarcely any difference between the *winter plumage* and the summer dress. The colour of the upper surface is a little more tawny during the winter season; but there is not any obscuring of the black throat by means of grey tips, as in the case of the Common Sparrow and its allies. I am not certain, however, that the young birds, after their first moult, do not show this peculiarity.

Specimens from the far east, China &c., are so like European examples that they cannot be separated even as races; they appear, however, to have a tinge of rufous on the lower part of the black throat: the latter is more extended in European birds, especially English specimens.

In Central Asia and Afghanistan a decidedly paler race occurs, much more sandy in tint and of a paler chocolate on the head, and having the black on the throat narrower.

Young in first plumage (Orléans, July). Recalls the plumage

of the adults, but differs in the following particulars:—The hind neck is ashy brown, with dusky blackish centres to the feathers; the crown dull ashy brown, with a superciliary line of vinous, widening out above the ear-coverts and encircling the nape; facial markings as in adult, but the white of the face and cheeks washed with ashy, the latter barred with dusky; fore neck and breast ashy, the abdomen dull white; sides of body and under tail-coverts light brown; wings rather more fulvescent than in the adult, and the white wing-bars washed with fulvous and much less pronounced.

Dr. Finsch procured a young male in full moult on the River Ob, on the 16th of September. From this specimen it would appear that the young bird *after its first moult* retains the brown character of the crown with the sides of the latter chocolate, as in the first plumage; otherwise the upper surface is similar to that of the adults; the black on the throat is much restricted, and appears to be somewhat hidden by the whitish tips to the lower throat-feathers.

Hab. The greater part of Europe, local in many places; eastward through Siberia to Japan and China; N.E. Africa; Central Asia, Persia, and Afghanistan; the Himalaya Mountains eastwards to Assam, Burmah, and through Tenasserim and the Malay peninsula to Java. In eastern localities it takes the place of *Passer domesticus*, and is the House-Sparrow of the country.

a. Ad. sk.	Lincolnshire.	Montagu Coll.
b. ♂ ad. sk.	Cambridgeshire, Jan. (*J. Baker*).	Salvin-Godman Coll.
c, *d*. ♀ ad. sk.	Cambridge, April 17 (*O. S.*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Cambridge, March (*P. Godman*).	Salvin-Godman Coll.
f, *g*. Pull.; *h*, *i*. Ad. st.	Gravesend.	Mr. J. Baker [C.].
k. Ad. st.	Kingsbury, Middlesex.	J. E. Harting, Esq. [P.].
l. ♀ ad. sk.	Hampstead, Middlesex, April 15, 1869 (*R. B. S.*).	Hume Coll.
m. Ad. sk.	Near London.	Gould Coll.
n, *o*, *p*. ♀ ad. sk.	Cookham, Berks, Feb. 1885.	R. B. Sharpe, Esq. [P.].
q. Ad. sk.	Sussex.	Hume Coll.
r. Ad. st.	Brighton, March 25, 1884.	Mr. Swaysland [C.].
s. Ad. sk.	Brighton, Oct. 26 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	Hove, Sussex, Jan. 23 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
u. Ad. sk.	Isle of Wight.	Mr. Butler [P.].
v. ♂ ad. sk.	Senneville, near Havre, May 6 (*A. Noury*).	E. Hargitt, Esq. [P.].
w. ♂ ad. sk.	Near Havre, Sept. 9 (*V. Pluche*).	E. Hargitt, Esq. [P.].
x. ♂ ad. sk.	Near Havre, Oct. 10 (*V. Pluche*).	E. Hargitt, Esq. [P.].

y. ♂ ad. sk.	Near Havre, Feb. 25 (*V. Pluche*).	E. Hargitt, Esq. [P.].
z. Juv. sk.	Orléans, July (*A. Noury*).	E. Hargitt, Esq. [P.].
a'. ♀ ad. sk.	Near Paris (*F. Petit*).	E. Hargitt, Esq. [P.].
b'. Ad. sk.	Belgium, April 10.	Brussels Mus. [P.].
c'. ♀ ad. sk.	Sarpsborg, Norway, June (*J. Baker*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	Borregaard, S. Norway, March 20 (*P. Godman*).	Salvin-Godman Coll.
e'. ♂ ad. sk.	Heligoland, Oct.	R. B. Sharpe, Esq. [P.].
f'. ♂ ad. sk.	Ust Zylma, Petchora River, April 19, 1875 (*H. S.*).	Henry Seebohm, Esq. [P.].
g'. Ad. sk.	Petchora River, N. Russia (*J. A. H. B.*).	Major Feilden & J. A. Harvie-Brown, Esq. [P.].
h'. ♂ jun. sk.	Bereosoff, Sept. 13 (*O. F.*).	Geogr. Soc. Bremen.
i'. ♂ ad. sk.	Narimskaja, River Ob (*O. Finsch*).	Geogr. Soc. Bremen.
k'. ♂ ad. sk.	Kaoschka, River Ob, Sept. 21 (*O. F.*).	Geogr. Soc. Bremen.
l'–o'. Ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
p'. Ad. sk.	Yarkand (*Col. Chapman*).	R. B. Sharpe, Esq. [P.].
q', *r'*. ♀ ad. sk.	Candahar, May 1839 (*Griffith*).	India Museum.
s'. Ad. sk.	Pushut (*Griffith*).	India Museum.
t', *u'*. Ad. sk.	Bala Chughur Serai (*Griffith*).	India Museum.
v', *w'*. ♂ ♀ ad. sk.	Candahar, Jan. 18.	Col. C. Swinhoe [P.].
x', *y'*. ♂ ad. sk.	Candahar, Jan. 21, 1879 (*Sir O. St. John*).	Hume Coll.
z'. ♀ ad. sk.	Candahar, April 20, 1879 (*Sir O. St. John*).	Hume Coll.
α. Ad. sk.	Deccan (*Sykes*).	India Museum.
β,*γ*. Ad.; *δ*. Juv. sk.	Nepal.	Hodgson Coll.
ε. Ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
ζ. Ad. sk.	Khatmandu, Nepal, March 1877 (*J. Scully*).	Hume Coll.
η. Ad. sk.	Godavery, Nepal, May 17, 1877 (*J. Scully*).	Hume Coll.
θ. Ad. sk.	Khatmandu, May 7, 1877 (*J. Scully*).	Hume Coll.
ι. Ad. sk.	Nepal, Dec. 1875 (*L. Mandelli*).	Hume Coll.
κ. Ad. sk.	Dolaka, Nepal, Jan. 1875 (*L. Mandelli*).	Hume Coll.
λ–o. Ad. sk.	Thibet, March 1875–76 (*L. Mandelli*).	Hume Coll.
π. Juv. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
ρ. Ad. sk.	Sikhim, Jan. 1874 (*L. Mandelli*).	Hume Coll.
σ. Ad. sk.	Sikhim, Feb. 1874 (*L. Mandelli*).	Hume Coll.
τ. Ad. sk.	Sikhim, Oct. 1873 (*L. Mandelli*).	Hume Coll.
υ, *φ*. Ad. sk.	Sikhim, Nov. 1876 (*L. Mandelli*).	Hume Coll.

χ, ψ. Ad. sk.	Darjiling, Nov. 1869–73.	Hume Coll.
ω–β'. Ad. sk.	Darjiling, Dec. 25, 1869.	Hume Coll.
γ'. Ad. sk.	Near Dibrughur, Assam (*J. R. Cripps*).	Hume Coll.
δ'. ♂ ad. ; ϵ', ζ'. ♀ ad. sk.	Dhollah, Assam, May 1877 (*J. Cockburn*).	Hume Coll.
η'. ♀ pull. sk.	Sadhyia, Assam, April 1877 (*J. Cockburn*).	Hume Coll.
θ'. ♀ ad. sk.	Sadhyia, Assam, May 24, 1877 (*J. Cockburn*).	Hume Coll.
ι', κ'. ♂ ♀ ad. sk.	Sadhyia, Assam, June 3, 1877 (*J. Cockburn*).	Hume Coll.
λ'. ♂ juv. sk.	Sadhyia, Assam, Aug. 14, 1877 (*J. Cockburn*).	Hume Coll.
μ'. ♂ ad. ; ν', ξ'. ♀ ad. sk.	Shillong, Dec. 12, 1877 (*J. Cockburn*).	Hume Coll.
o', π'. ♂ ad. sk.	Manipur, Feb. 27, 1881 (*A. O. H.*).	Hume Coll.
ρ', σ', τ'. ♂ ad.; υ', ϕ'. ♀ ad. sk.	Manipur, March 5, 1881 (*A. O. H.*).	Hume Coll.
χ'. ♂ pull. sk.	Kokshin-Koolel, Manipur, April 7, 1881 (*A. O. H.*).	Hume Coll.
ψ'. ♀ juv. sk.	Pegu.	Oates Coll.
ω'. ♂ ad. sk.	Pegu, Sept. 29.	Oates Coll.
α''. Ad. sk.	Bhamau, Feb. 6.	Dr. J. Anderson [C.].
β''. Ad. sk.	Momien, Yun-nan, July 3.	Dr. J. Anderson [C.].
γ''. Ad. sk.	Mangwyne, Sanda Valley, May 12.	Dr. J. Anderson [C.].
δ''. ♂ ad. sk.	Lemyne, 1 march from Yea, Tenasserim, March 28, 1874 (*W. Davison*).	Hume Coll.
ϵ'', ζ''. ♂ ad. sk.	Moulmein, Feb. 22, 1878 (*W. Davison*).	Hume Coll.
η''. Ad. sk.	Pahpoon, Dec. 1873 (*W. Davison*).	Hume Coll.
θ''. ♂ ad. sk.	Tavoy, Jan. 1, 1879 (*W. Davison*).	Hume Coll.
ι''. ♂ ad. sk.	Tavoy, April 27, 1874 (*W. Davison*).	Hume Coll.
κ'', λ''. ♂ ♀ ad. sk.	Tavoy, June 1, 1874 (*W. Davison*).	Hume Coll.
μ''. ♂ juv. sk.	Mergui, June 7, 1875 (*W. Davison*).	Hume Coll.
ν''. ♀ ad. sk.	Pakchan, May 4, 1875 (*W. Davison*).	Hume Coll.
ξ''. Ad. sk.	Pakchan, Dec. 12, 1873 (*W. Davison*).	Hume Coll.
o'', π''. ♂ ad. ; ρ'', σ''. ♀ ad. sk.	Tonka, Salanga Islands, Jan. 1879 (*W. Davison*).	Hume Coll.
τ''. ♀ ad. sk.	Tonka, Jan. 1879 (*J. Darling*).	Hume Coll.
υ''. ♂ ad. sk.	Salang, March 14, 1879 (*J. Darling*).	Hume Coll.
ϕ''–ω''. ♂ ad. et juv.; α'''. ♀ ad. sk.	Kossoum, May 1879 (*J. Darling*).	Hume Coll.
β'''. ♂ juv. sk.	Poongyah, Aug. 4, 1879 (*J. Darling*).	Hume Coll.

γ'''. ♂ ad.; δ''', ϵ'''. ♀ ad. sk.	Klang, Salangore, June 1879 (*W. Davison*)	Hume Coll.
ζ'''. ♂ ad. sk.	Dingding Islands, Feb. 22 1879 (*W. Davison*).	Hume Coll.
η'''. ♂ ad. sk.	Singapore (*Dr. Cantor*).	India Museum.
θ'''. ♂ ad. sk.	Singapore, Sept. 19, 1878 (*W. Davison*).	Hume Coll.
ι'''–μ'''. ♂ ad.; ν'''. ♀ ad. sk.	Singapore Island, Sept. 1875 (*W. Davison*).	Hume Coll.
ξ'''. Ad. sk.	Malay peninsula, Jan. 18, 1879 (*W. Davison*).	Hume Coll.
o'''. ♂ ad. sk.; π'''. Juv. sk.	Penang (*Dr. Cantor*).	India Museum.
ρ'''. Ad. sk.	Java.	Hume Coll.
σ'''. Ad. sk.	Java (*Mus. Lugd.*).	Salvin-Godman Coll.
τ''', υ'''. Ad. sk.	Saigon, Cochin China.	M. E. Pierre [P.].
ϕ'''. ♂ ad. sk.	South Manchuria, June 14, 1846.	Dr. James [P.].
χ'''. Ad. sk.	Japan (*Leiden Mus.*).	Salvin-Godman Coll.
ψ^{n}. Ad. sk.	Japan.	Hume Coll.
ω''', *a*. ♂ ad. sk.	Nagasaki.	F. Ringer, Esq. [P.].
b. ♂ ad. sk.	Hakodadi, Feb. 12, 1865.	Henry Whitely, Esq. [C.].
c. Ad. sk.	Rintang, China.	J. R. Reeves, Esq. [P.].
d. ♂ ad. sk.	Woosung, China, April.	J. R. Reeves, Esq. [P.].
e. Ad. sk.	Chusan (*Capt. Ince*).	Gould Coll.
f. ♂ ad. sk.	Shanghai, Dec. 1881.	F. W. Styan, Esq. [P.].
g. ♂ ad. sk.	St. Louis, Missouri, U. S. A., April, 10, 1878 (*introduced*).	H. K. Coale, Esq. [P.].
h. Sternum.	England.	J. Ray, Esq.
i. Skeleton.	England.	Purchased.
k, *l*, *m*. Skulls.	S. Germany.	Dr. Günther [C.].

2. Passer saturatus.

Passer montanus (*nec L.*), *Cass. Proc. Philad. Acad.* 1862, p. 314; *Seebohm, Ibis*, 1887, p. 174.
Passer saturatus, *Stejneger, Proc. U.S. Nat. Mus.* viii. p. 19 (1885).

Adult. Similar to *P. montanus*, but washed all over with umber-brown, except on the head, which is slightly tinged with ashy; the feathers on the breast are indistinctly edged with brown, the cross bands on the wings are broad and strongly suffused with the brown colour, and the whitish or greyish tips of the tertiaries have entirely disappeared, the whole border being brown; on back no trace of grey, and the black stripes small and few; all brown colours, except that of the head, deeper and richer. (*Stejneger.*)

Hab. Liu-Kiu Islands, Japanese Sea.

3. Passer domesticus.

Le Moineau franc, *Briss. Orn.* iii. p. 72 (1760): *Daubent. Pl. Enl.* iv. pl. 6. fig. 1, pl. 55. fig. 1.
Fringilla domestica, *Linn. Syst. Nat.* i. p. 323 (1766); *Temm. Man.*

d'Orn. i. p. 350 (1820); *Forst. Cat. Brit. B.* p. 11 (1817); *Roux, Orn. Prov.* pls. 80, 81, 82 (1825); *Naum. Vög. Deutschl.* iv. pl. 115 (1826); *Werner, Atlas, Granivores*, pl. 39 (1827); *Crespon, Orn. Gard*, p. 244 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 180 (1840); *Yarr. Brit. B.* i. p. 474 (1843); *Kjærb. Danm. Fugle*, pl. xxvi. fig. 4 (1852); *Sundev. Svensk. Fogl.* pl. 6. figs. 1, 2 (c. 1856); *Schl. Dier. Nederl., Vog.* pl. 16. figs. 11, 12 (1861); *Fallon, Ois. Belg.* p. 98 (1875).

Le Moineau, *Buff. Hist. Nat. Ois.* iii. p. 474 (1775).

House-Sparrow, *Lath. Gen. Syn.* ii. pt. i. p. 248 (1783).

Passer domesticus, *Pall. Zoogr. Rosso-Asiat.* ii. p. 29 (1811); *Koch, Syst. baier. Zool.* p. 219 (1816); *Macgill. Brit. B.* i. p. 340 (1837); *Keys. u. Blas. Wirb. Eur.* p. xl (1840); *Mühle, Beitr. Orn. Griechenl.* p. 44 (1844); *Schl. Rev. Crit.* p. lxiv (1844); *Rüpp. Syst. Uebers.* p. 78 (1845); *Gray, Gen. B.* ii. p. 372 (1849); *Thomps. B. Irel.* i. p. 251 (1849); *Bp. Consp.* i. p. 509 (1850); *Cab. Mus. Hein.* Th. i. p. 155 (1850); *Middend. Reis. Sibir., Zool.* p. 149 (1851); *Schl. Vog. Nederl.* pl. 161 (1854); *Hewits. Eggs Brit. B.* i. p. 155, pl. 42. figs. 3, 4 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 127 (1859); *Schrenck, Reis. Amurl.* p. 290 (1859); *Linderm. Vög. Griechenl.* p. 57 (1860); *Powys, Ibis*, 1860, p. 137; *Maillard, Ibis*, 1863, p. 104; *Gray, List Brit. B.* p. 100 (1863); *Radde, Reis. Sibir., Vög.* p. 179 (1863); *Allen, Ibis*, 1864, p. 239; *More, Ibis*, 1865, p. 127; *Lilford, Ibis*, 1866, p. 177; *Taylor, Ibis*, 1867, p. 64; *Tristram, t. c.* p. 369; *Degl. et Gerbe, Orn. Eur.* i. p. 241 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 129 (1867); *Smith, Ibis*, 1868, p. 445; *Saunders, Ibis*, 1869, p. 172; *Wright, t. c.* pp. 250, 256; *Borggr. Vogelf. Norddeutschl.* p. 63 (1869); *Gould, B. Gr. Br.* iii. pl. 32 (c. 1870); *Fritsch, Vög. Eur.* tab. 20. fig. 16 (c. 1870); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 628 (1870); *Gray, Hand-l. B.* ii. p. 86, no. 725 (1870); *Elwes & Buckley, Ibis*, 1870, p. 192; *R. Gray, B. West Scotl.* p. 141 (1871); *Saunders, Ibis*, 1871, p. 218; *Godm. Ibis*, 1872, p. 210; *Harting, Handb. Brit. B.* p. 28 (1872); *Shelley, B. Egypt*, p. 148 (1872); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Alst. & Harvie-Brown, Ibis*, 1873, p. 54; *Durnf. Ibis*, 1874, p. 396; *Lilford, Ibis*, 1875, p. 3; *Dresser, t. c.* p. 239; *Danf. & Harvie-Brown, t. c.* p. 312; *Irby, B. Gibr.* p. 119 (1875); *Blanf. East. Persia*, ii. p. 254 (1876); *Taez. Bull. Soc. Zool. France*, i. p. 78 (1876); *Seebohm & Harvie-Brown, Ibis*, 1876, p. 114; *Dresser, B. Eur.* iii. p. 587, pl. 176. fig. 1 (1876); *Newt. ed. Yarr. Brit. B.* ii. p. 89 (1876); *Danf. Ibis*, 1878, p. 22; *Seebohm, t. c.* p. 334; *Hume, Str. F.* 1878, vol. ii. p. 64; *Legge, B. Ceylon*, p. 600 (1879); *Finsch, MT. zool.-bot. Gesellsch. Wien*, 1879, p. 209; *Hume, Str. F.* 1879, p. 107; *Scully, t. c.* p. 333; *Doig, t. c.* p. 371; *Butler, Cat. B. Sind*, p. 46 (1879); *Finsch, Ibis*, 1880, p. 78; *Vidal, Str. F.* 1880, p. 72; *Barnes, t. c.* pp. 218, 456; *Butler, t. c.* p. 416; *id. Cat. B. S. Bomb. Pres.* p. 62 (1880); *Reid, Str. F.* 1881, p. 56; *Salv. Cat. Strickl. Coll.* p. 209 (1882); *C. Swinh. Ibis*, 1882, p. 112; *Seebohm, t. c.* p. 218; *Dixon, t. c.* p. 574; *Davison, Str. F.* 1883, p. 403; *B. O. U. List Brit. B.* p. 51 (1883); *Irby, Ibis*, 1883, p. 183; *Homeyer & Tancré, MT. Orn. Ver. Wien*, 1883, p. 89; *Seebohm, Hist. Brit. B.* ii. p. 63 (1884); *Tristr. Faun. & Flora Palest.* p. 67 (1884); *Radde, Orn. Cauc.* p. 182 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 344 (1884); *Clarke, Ibis*, 1884, p. 143; *Saunders, t. c.* p. 375; *Marshall, t. c.* p. 419; *Dixon, Ibis*, 1885, p. 82; *Swinh. & Barnes, t. c.* p. 129; *Reid, t. c.* p. 245; *Booth, Rough Notes*, pt. x. (1885); *Giglioli, Avif. Ital.* p. 26 (1886); *Salvad. Elench. Uce. Ital.* p. 167 (1887).

Pyrgita domestica, *Cuv. Règne Anim.* i. p. 385 (1817); *Boie, Isis*, 1822, p. 554; *Brehm, Vög. Deutschl.* p. 264 (1831); *Gould, B. Eur.* iii. pl. 184 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838); *Selys-Longch. Faune Belge*, p. 80 (1842); *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 285 (nos. 447–448); *id. in Gray's Zool. Misc.* p. 84 (1844); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 107 (1846); *Licht. Nomencl. Av. Berol.* p. 47 (1854); *Filippi, Viagg. Persia*, p. 349 (1865).

Pyrgita pagorum, *Brehm, Vög. Deutschl.* p. 265 (1831).

Pyrgita rustica, *Brehm, t. c.* p. 266 (1831).

Fringilla pyrrhoptera, *Less. in Bélang. Voy. Ind. Orient.* p. 274 (1834).

Passer indicus, *Jard. & Selby, Ill. Orn.* iii. p. 118 (c. 1848); *Blyth, Cat. B. Mus. As. Soc.* p. 119 (1849); *Bp. Consp.* i. p. 510 (1850); *Kelaart, Prodr.* p. 126 (1852); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 499 (1856); *Irby, Ibis*, 1861, p. 231; *Jerd. B. Ind.* ii. p. 362 (1863); *Beavan, Ibis*, 1866, p. 419, 1867, p. 138; *Blyth, Ibis*, 1867, p. 41; *Hume, Ibis*, 1868, p. 240; *Pelz. t. c.* p. 318; *Brooks, Ibis*, 1869, p. 59; *Gray, Hand-l. B.* ii. p. 86, no. 7259 (1870); *Holdsw. P. Z. S.* 1872, p. 464; *Hume & Henders. Lahore to Yark.* p. 252 (1873); *Hayes Lloyd, Ibis*, 1873, p. 413; *Hume, Nests & Eggs Ind. B.* p. 457 (1873); *id. Str. F.* 1873, p. 209; *Adam, t. c.* p. 387; *Ball, Str. F.* 1874, p. 421; *Oates, Str. F.* 1875, p. 156; *Fairb. t. c.* p. 261; *Butler, t. c.* p. 496; *Blyth, B. Burm.* p. 93 (1875); *Blanf. East. Persia*, ii. p. 254 (1876); *Oates, Str. F.* 1877, p. 163; *Fairb. t. c.* p. 408; *Hume & Davison, Str. F.* 1878, pp. 406, 520; *Davidson & Wenden, Str. F.* 1878, vol. ii. p. 85; *Ball, t. c.* p. 222; *Cripps, t. c.* p. 294; *Tirand, Bull. Com. Agric. Cochinchine*, p. 133 (1879); *Hume, Str. F.* 1879, p. 169; *Bingham, t. c.* p. 195; *Biddulph, Ibis*, 1881, p. 79; *Scully, t. c.* p. 573; *Biddulph, Ibis*, 1882, p. 281; *Oates, B. Brit. Burm.* i. p. 346 (1883); *Murray, Verteb. Faun. Sindh*, p. 183 (1884).

Passer pyrrhopterus, *Gray, Gen. B.* ii. p. 373 (1849); *id. Hand-l. B.* ii. p. 86, no. 7278 (1870).

? Passer rufipectus, *Bp. Consp.* i. p. 509 (1850); *Loche, Expl. Sci. Algér., Ois.* i. p. 136 (1867); *Gray, Hand-l. B.* ii. p. 86, no. 7270 (1870).

Passer arboreus, *Licht. in Mus. Berol.*; *Bp. Consp.* i. p. 510 (1850).

Passer confucius, *Bp. Notes Orn. Coll. Delattre*, p. 14 (1854); *Gray, Hand-l. B.* ii. p. 88, no. 7277 (1870).

Pyrgita valida, etc., *Brehm, Vogelf.* p. 98 (1855).

Passer tingitanus, *Bp. Cat. Parzud.* p. 18 (1856); *Loche, Expl. Sci. Algér., Ois.* i. p. 132 (1867); *Homeyer, J. f. O.* 1869, p. 260, note.

Passer rufidorsalis etc., *Brehm, Naum.* 1856, p. 376.

Pyrgita cahirina, *Heugl. J. f. O.* 1867, p. 299 (*ex Würt. MSS.*).

Pyrgita pectoralis, *Heugl. ut suprà.*

Passer domesticus, subsp. caucasicus, *Bogd. B. Cauc.* p. 60 (1879).

Passer domesticus indicus, *Seebohm, Ibis*, 1883, p. 8.

Adult male in summer plumage. General colour above chestnut, streaked with black on the mantle and back, with a concealed subterminal mark of ashy white on the feathers of this portion of the body: lower back and rump dull ashy, the upper tail-coverts browner; scapulars like the back; lesser wing-coverts uniform chestnut; median coverts black, broadly tipped with white, forming a wing-bar; greater coverts black, broadly edged with chestnut; bastard-wing blackish; primary-coverts and quills blackish, edged with pale rufous, broader

on the inner secondaries; the primaries with a pale rufous mark at the base of the outer web, which is again paler-edged at about one third from the tip; tail-feathers dusky brown, edged with ashy fulvous or whity brown; crown of head and nape ashy grey, the hind neck also ashy grey, mixed with chestnut; lores and a line below the eye black, the latter with a small white spot behind it; from behind the upper part of the eye a broad streak of chestnut, widening out on the sides of the neck; ear-coverts dull ashy, with whitish bases; cheeks white, widening out on the sides of the neck, which are ashy mixed with white; base of cheeks, throat, and fore neck black; sides of breast pale ashy, browner on the flanks; centre of the breast and abdomen white, with a few dusky streaks on the upper breast; thighs light brown; under tail-coverts pale brown, edged with whitish: under wing-coverts and axillaries pale ochreous, the lower ones yellowish white; quills dusky below, ashy fulvous along the inner web; bill leaden-blue in summer, blackish or horn-brown in winter; legs brown: iris hazel. Total length 6 inches, culmen 0·55, wing 2·95, tail 2·1, tarsus 0·75.

The *adult male in winter plumage* is much duller than in summer, the whole aspect of the bird being browner: the chestnut of the back is obscured by fulvous, the head is brown instead of grey, the lower back and rump earthy brown instead of ashy; the wings and tail are as in summer, but the edges to the feathers are broader and the white wing-band is washed with fulvous; the sides of the face are ashy brown, with a little white behind the cheeks, the fore parts of which, with the lores and the feathers under the eye, are black; over the eye a small line of white; the chestnut band on the side of the head obscured by sandy-buff tips to the feathers; the whole of the throat hidden by pale sandy edges to the feathers.

The summer plumage is gained without a moult by the shedding of the pale tips to the feathers, and the bill changes from horny brown to black.

The Eastern House-Sparrow differs from the ordinary *Passer domesticus* of Europe in being much lighter and purer in colour, the cheeks and ear-coverts being generally pure white, as also the under wing-coverts and axillaries; there is also a broader streak of black below the eye, and the black mark at the base of the cheeks is larger. But the Sparrow varies so much according to locality, that a perfect gradation between the two forms can be found; for in the south of Europe the colour is always brighter and purer than in the north, and this variation increases according to the more eastern habitat of the species.

The House-Sparrow from North-east Africa shows a tendency to chestnut in the centre of the black on the fore neck. This is by no means a specific character, however, for it is present in some English specimens, and also in another from Finland. In the last-named countries, at least, it may be considered a mark of extreme age.

Adult female. Browner than the male; the mantle and back tawny instead of chestnut, streaked with black as in the male; lower back and rump ashy brown; wings and tail as in the male,

excepting that the white wing-bar is narrower and the edges to the feathers more tawny rufous; crown of head and neck brown, with a fawn-coloured streak along the sides of the hinder crown, widening out slightly towards the nape; lores ashy; eyelid whitish; ear-coverts ashy brown, separated from the tawny band by a streak of dark brown; cheeks ashy brown; throat dull ashy whitish; fore neck and breast pale brown, the flanks clearer brown, as also the thighs; abdomen purer white: on the breast and flanks some faintly indicated shaft-lines; under tail-coverts buff, with pale-brown centres; axillaries pale buff: under wing-coverts dull whitish. Total length 5·2 inches, culmen 0·45, wing 3, tail 2·2, tarsus 0·75.

Young birds, of both sexes, at first resemble the adult female, but are whiter below, especially on the throat. At the first autumn moult the males assume the plumage of the adult, the black throat being always distinguishable below the ashy edges to the feathers, these being shed in due course during the following spring, when the fully adult breeding-plumage is donned.

Hab. Nearly the whole of Europe, but replaced in Italy by *P. italiæ*, extending eastward to Persia and Central Asia, India, and Ceylon. The eastern specimens (*P. indicus* auct.) are smaller and paler (*vide suprà*).

a, b. ♂ ♀ ad. sk.	Orkneys (*Dunn*).	R. B. Sharpe, Esq. [P.].
c. ♀ ad. sk.	Eskdale, Forfarshire, N.B.	Gould Coll.
d. Var. alb. st.	England.	Zoological Society.
e. Var. st.	England.	
f. ♀ ad. sk.	Preston Hall, Shropshire.	Gould Coll.
g, h. ♂ ♀ ad. sk.	Cambridgeshire (*J. Baker*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Cambridgeshire, May (*O. S.*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad.; *m, n.* Juv. st.	Cambridgeshire.	Mr. J. Baker [C.].
o. Var. st.	Cambridgeshire.	Mr. J. Baker [C.].
p, q. ♂ ♀ ad. sk.	Oxford, Feb. 4.	R. B. Sharpe, Esq. [P.].
r. ♂ ad. sk.	Near London, June.	Gould Coll.
s. ♂ ad. sk.	Finchley, Feb. 30 (*O. S.*).	Salvin-Godman Coll.
t, u. ♂ ♀ ad. sk.	Hanwell, Feb. 1885.	R. B. Sharpe, Esq. [P.].
v–b'. ♂ ad. sk; *c'–h'.* ♀ ad. sk.	Cookham, Berks, Feb. 29.	R. B. Sharpe, Esq. [P.].
i'. ♂ ad. sk.	Cookham, Dec. 26.	R. B. Sharpe, Esq. [P.].
k', l'. ♂ juv.; *m', n', o'.* Juv. sk.	Cookham, Aug.	R. B. Sharpe, Esq. [P.].
p'. ♂ juv. sk.	Surbiton, Surrey, Aug. 16.	Dr. Günther [P.].
q'. Var. alb. st.	Surbiton, Surrey.	Dr. Günther [P.].
r'. ♂ ad. sk.	Godalming, Surrey, Jan. (*F. G.*).	Salvin-Godman Coll.
s'. ♂ ad. sk.	Romney Marsh, Kent, July 25.	R. B. Sharpe, Esq. [P.].
t', u', v'. ♂ juv.; *w', x'.* ♀ juv. sk.	Pagham, Sussex, Sept. 4.	R. B. Sharpe, Esq. [P.].
y. ♂ ad. sk.	Brighton, Sussex, Nov.	R. B. Sharpe, Esq. [P.].

z'. Var. alb. st.	Highworth, Wilts, Oct. 1883.	J. E. Harting, Esq. [P.].
a. ♂ var.; *β*. ♀ ad. sk.	Devonshire.	Montagu Coll.
γ, *δ*. ♂ ad. st.	Pembrokeshire, June.	Dr. Günther [P.].
ε. ♂ ad. sk.	South Norway, June (*J. Baker*).	Salvin-Godman Coll.
ζ. ♂ ad. sk.	Finland, July 28, 1851 (*J. von Wright*).	Gould Coll.
η. ♂ ad. sk.	Ust Zylma, Petchora River, N. Russia, May 18 (*H. Seebohm and J. A. Harvie-Brown*).	Major Feilden and J. A. Harvie-Brown, Esq. [P.].
θ. ♀ ad. sk.	Hareskov, Denmark, Jan. 7, 1871 (*A. Benzon*).	Hume Coll.
ι. ♂ ad. sk.	Holland.	Gould Coll.
κ, *λ*. ♂ ♀ ad. sk.	Hâvre, France, May 6 (*V. Pluche*).	Edward Hargitt, Esq. [P.].
μ, *ν*. ♂ ♀ ad. sk.	Near Paris (*F. Petit*).	Edward Hargitt, Esq. [P.].
ξ, *ο*. ♂ ♀ ad. sk.	Marseilles, Feb. 10.	Gould Coll.
π. ♂ ad. sk.	Near Malaga, Spain, Feb.	Gould Coll.
ρ. ♂ ad. sk.	Granada.	Howard Saunders, Esq. [P.].
σ. ♂ ad. sk.	Bordighera, N. Italy, March (*A. B. Brooke*).	R. B. Sharpe, Esq. [P.].
τ. ♂ ad. sk.	Near Vienna, Austria.	R. B. Sharpe, Esq. [P.].
υ. ♀ ad. sk.	Coimbra, Portugal, Nov. 1886.	Dr. L. Vieira [P.].
φ, *χ*. ♂ ad. sk.	Tangiers (*V. Favier*).	Gould Coll.
ψ. ♂ ad. sk.	Delta, Egypt, April 14 (*S. S. Allen*).	Gould Coll.
ω. ♂ ad. sk.	Erment, Egypt, Feb. 7 (*S. S. Allen*).	Gould Coll.
α'. ♂ ad. sk.	Egypt, March 24, 1875.	J. H. Gurney, Esq., Jun. [P.].
β'. ♂ ad. sk.	Nubia.	Dr. A. Leith-Adams [P.].
γ'. ♂ ad. sk.	Below Khartoum.	Consul Petherick [P.].
δ'. ♂ ad. sk.	Bashan, Palestine.	Canon Tristram [C.].
ε'. Juv. sk.	Trebizond (*Dickson and Ross*).	Zoological Society.
ζ'. ♂ ad. sk.	Erzeroum (*Dickson and Ross*).	Gould Coll.
η'. ♀ ad. sk.	Persia.	Purchased.
θ'. ♂ ad. sk.	Forest on Caspian Sea, Nov.	Sir O. St. John [C.].
ι'. ♂ ad. sk.	Resht, Nov.	Sir O. St. John [C.].
κ'. ♂ ad. sk.	Near Shiraz, Sept.	Sir O. St. John [C.].
λ'. ♂ ad. sk.	Bushire, Feb.	Sir O. St. John [C.].
μ'. ♂ ad. sk.	S. W. of Karman, S.E. Persia, May 29.	W. T. Blanford, Esq. [P.].
ν'. ♂ ad. sk.	Bampur, Baluchistan, April 4.	W. T. Blanford, Esq. [P.].
ξ'. ♀ ad. sk.	Gwadar, Baluchistan, Dec. 31.	W. T. Blanford, Esq. [P.].
ο'. ♀ ad. sk.	Gwadar, Jan. 1, 1872 (*W. T. B.*).	Hume Coll.
π'. ♂ ad. sk.	Turkestan, May 18 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
ρ'. ♂ ad. sk.	Khusan, W. Afghanistan, April 16, 1885.	Dr. Aitchison [C.].

σ'. ♀ ad. sk.	Tirphul.	Dr. Aitchison [C.].
τ', υ', φ'. ♂ ad. sk.	Afghanistan (*Griffith*).	India Museum.
χ', ψ'. ♀ ad. sk.	Pushut (*Griffith*).	India Museum.
ω'. ♀ ad. sk.	Dadur (*Griffith*).	India Museum.
aa, bb. ♂ ; *cc, dd*. ♀ ad. sk.	Candahar, April (*Sir O. St. John*).	Hume Coll.
ee, ff. ♂ ; *gg*. ♂ imm.* ; *hh*. ♀ ad. sk.	Candahar, April.	Col. C. Swinhoe [P.].
ii. ♂ ad. sk.	Nal, Khelat, April 25, 1877 (*O. T. Duke*).	Hume Coll.
kk. ♀ ad. sk.	Roree district, Sind, Nov. 1871 (*A. O. H.*).	Hume Coll.
ll. ♂ ad. sk.	Banks of Chenab, near junction with Indus, Sind, Dec. 9, 1871 (*A. O. H.*)	Hume Coll.
mm–oo. ♂ ad. ; *pp*. ♀ ad. sk.	Jacobabad, Sind, Dec. 21, 1871 (*A. O. H.*).	Hume Coll.
qq. ♀ ad. sk.	Shikarpur (*Griffith*).	India Museum.
rr. ♂ ad. sk.	Karachi, March 7, 1876 (*E. A. Butler*).	Hume Coll.
ss. ♂ ad. sk.	Deesa, Jan. 5, 1876 (*E. A. Butler*).	Hume Coll.
tt. ♀ ad. sk.	Koochaman, Sambhur, Nov. 20, 1871 (*R. M. Adams*).	Hume Coll.
uu. ♂ ad. sk.	Mt. Aboo, March 19, 1868 (*Dr. G. King*).	Hume Coll.
vv–ww. ♂ ad. sk.	Jodhpur, Rajputana, Jan. 25, 1878 (*A. O. H.*).	Hume Coll.
xx–bb'. ♂ ad. ; *cc'–ee'*. ♀ ad. sk.	Sirsa District, Punjab, Dec. 1867 (*A. O. H.*).	Hume Coll.
ff'. ♂ ad. sk.	Sultanpur, Gurgaon district, Oct. 10, 1876 (*W. N. Chill*).	Hume Coll.
gg', hh'. ♂ ad. sk.	Ramoo, Cashmere, May 16, 1871 (*W. E. Brooks*).	Hume Coll.
ii'–kk'. ♂ ♀ ad. sk.	Peshawur.	Colonel Way [P.].
ll'–oo'. ♂ ; *pp'–ss'*. ♀ ad. sk.	Cashmere, Aug. 1870.	Hume Coll.
tt'. ♀ ad. sk.	Kotegurh, near Simla.	Hume Coll.
uu'. ♂ ad. sk.	Kotegurh, June 22, 1871.	Hume Coll.
vv', ww'. ♂ ad. sk.	Kotegurh, Dec. 7, 1870.	Hume Coll.
xx'. ♂ ad. sk.	Pumlahie, Koteghur, May 15, 1870.	Hume Coll.
yy'. ♂ ; *zz', aa*. ♀ ad. sk.	Kotekhaie, Feb. 1871.	Hume Coll.
ββ, γγ. ♀ ad. sk.	Jural in Khunaitee, Dec. 21, 1870.	Hume Coll.
δδ. ♂ ad. sk.	Masuri.	Hume Coll.
εε. ♂ ad. sk.	Valley of the Baghirati, May 28, 1874 (*W. E. Brooks*).	Hume Coll.
ζζ, ηη. ♂ ♀ ad. sk.	Kumaon (*Strachey*).	India Museum.

* This specimen has a grey throat (not black), light ferruginous wing-coverts (not chestnut), and no black on the base of the cheeks or round the eye. It is apparently distinct, and may be called *P. griseigularis*.

θθ, *ιι*. ♂ ad.; *κκ*, *λλ*. ♀ ad. sk.	Nepal.	Hodgson Coll.
μμ, *νν*. ♂ ad.; *ξξ*, *οο*. ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
ππ. ♂ ad.; *ρρ*. ♀ juv. sk.	Khatmandu, Nepal, May 26, 1877 (*Dr. J. Scully*).	Hume Coll.
σσ. ♂ ad. sk.	Himalayas (*Dr. Royle*).	India Museum.
ττ. ♀ ad. sk.	Bootan (*Pemberton*).	India Museum.
νν. ♂ ad. sk.	Bootan Dooars, Jan. 1873 (*L. Mandelli*).	Hume Coll.
φφ. ♂ ad. sk.	Bootan Dooars, Dec. 1872 (*L. Mandelli*).	Hume Coll.
χχ. ♀ ad. sk.	Rahun, Etawah, Jan. 11, 1871 (*W. E. Brooks*).	Hume Coll.
ψψ–b. ♂ ad.; *c*, *d*. *e*. ♀ ad. sk.	Etawah, Jan. 1871 (*W. E. Brooks*).	Hume Coll.
f. ♂ ad.; *g*, *h*, *i*. ♀ ad. sk.	Etawah, Oct. 1865.	Hume Coll.
k–o. ♂ ad.; *p–t*. ♀ ad. sk.	Sundupur, Etawah, Jan. 1871 (*W. E. Brooks*).	Hume Coll.
u. ♂ juv. sk.	Aligurh, Nov. 6, 1877 (*A. Anderson*).	Hume Coll.
v–y. ♂ ad.; *z*. ♀ ad. sk.	Mynpuri, Jan. 1871 (*W. E. Brooks*).	Hume Coll.
a'. ♂ ad. sk.	Mogulserai, Jan. 12, 1875 (*W. E. Brooks*).	Hume Coll.
b', *c'*. ♀ ad. sk.	Dibrughur, Assam, July 1879 (*J. R. Cripps*).	Hume Coll.
d', *e'*. ♀ ad. et juv. sk.	Dibrughur, Aug. 1879 (*J. R. Cripps*).	Hume Coll.
f'. ♀ ad. sk.	Dibrughur, April 27, 1880 (*J. R. Cripps*).	Hume Coll.
g'. ♂ ad. sk.	Comillah, Tippera.	Hume Coll.
h'. ♀ ad. sk.	Mhow, May 4.	Col. Swinhoe.
i', *k'*. ♂ ♀ ad. sk.	Kamptee, C. Prov.	Dr. B. Hinde [P.].
l'. ♂ ad. sk.	Dhulia, Khandeish, Oct. 28, 1880 (*W. Davison*).	Hume Coll.
m', *n'*. ♂ ♀ ad. sk.	Deccan (*Sykes*).	India Museum.
o'. ♂ ad. sk.	Belgaum, Sept. 11, 1879 (*E. A. Butler*).	Hume Coll.
p'. ♂ ad. sk.	Madras (*Jerdon*).	Gould Coll.
q'. ♂ ad. sk.	Ootacamund, Nilghiris, April 5, 1876 (*W. Davison*).	Hume Coll.
r'. ♂ ad. sk.	Anjango, Travancore, Dec. 1872.	Hume Coll.
s', *t'*. ♂ ad. sk.	Ceylon, March.	Col. Vincent Legge [P.].
u', *v'*. ♂ ad. sk.	Nedong, Attaran River, Tenasserim, Dec. 10, 1878 (*W. Davison*).	Hume Coll.
w'. ♂ ad. sk.	Moulmein, May 20, 1873 (*W. Davison*).	Hume Coll.
x', *y'*, *z*. ♂ ad.; *α*, *β*. ♀ ad.; *γ*. ♀ juv. sk.	Pegu, October.	Oates Coll.

δ, ε. ♂ ♀ ad. sk.	Mauritius.	R. B. Sharpe, Esq. [P.].
ζ. ♂ ad. sk.	Chicago, Feb. 26 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
η. ♀ ad. sk.	Chicago, U.S.A., April 8 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
θ. ♂ ad. sk.	Chicago, May 26 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
ι. Pull. sk.	Chicago, May 11 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
κ. Sternum.	England.	J. Ingall, Esq.
λ, μ, ν. Skeleton.	England.	Purchased.
ξ, ο, π. Skulls.	S. Germany.	Dr. Günther [C.].
ρ. Skulls.	Silesia.	Dr. Günther [C.].

4. Passer italiæ.

Fringilla italiæ, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 199 (1817); *id. Gal. Ois.* i. p. 76, pl. 63 (1825); *Roux, Orn. Prov.* pl. 32 (1825).

Fringilla cisalpina, *Temm. Man. d'Orn.* p. 351 (1820); *Werner, Atlas, Granivores*, pl. 40 (1827); *Crespon, Orn. Gard*, p. 246 (1840).

Pyrgita cisalpina, *Gould, B. Eur.* iii. pl. 185. fig. 2 (1837); *Rüpp. Syst. Uebers.* p. 78 (1845); *Licht. Nomenel. Av. Berol.* p. 47 (1854).

Pyrgita italica, *Bp. Comp. List B. Eur. & Amer.* p. 31 (1838).

Passer italicus, *Keys. u. Blas. Wirb. Eur.* p. xl (1840); *Degl. Orn. Eur.* i. p. 207 (1849); *Linderm. Vög. Griechenl.* p. 57 (1860).

Passer domesticus cisalpinus, *Schl. Rev. Crit.* p. lxiv (1844).

Passer italiæ, *Bp. Consp.* i. p. 509 (1850); *Cab. Mus. Hein.* Th. i. p. 155 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 128 (1859); *Tristr. Ibis*, 1859, p. 293; *Giglioli, Ibis*, 1865, p. 57; *Bettoni, Ucc. nidif. Lomb.* i. pl. 13 (1865); *Degl. et Gerbe, Orn. Eur.* i. p. 242 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 133 (1867); *Dodcrl. Avif. Sicil.* p. 73 (1869); *Selys-Longch. Ibis*, 1870, p. 454; *Gray, Hand-l. B.* ii. p. 86, no. 7269 (1870); *Fritsch, Vög. Eur.* tab. 20. fig. 11 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 147 (1871); *Shelley, B. Egypt*, p. 148 (1872); *Lilford, Ibis*, 1875, p. 10; *Dresser, B. Eur.* iii. p. 585, pl. 176. fig. 2 (1876); *Giglioli, Ibis*, 1881, p. 203; *id. Iconogr. Avif. Ital.* part 20 (1882); *Salvin, Cat. Strickl. Coll.* p. 210 (1882); *Tristr. Faun. & Flor. Palest.* p. 67 (1884); *Whitehead, Ibis*, 1885, p. 39; *Giglioli, Avif. Ital.* p. 25 (1886); *Salvad. Elench. Ucc. Ital.* p. 168 (1887).

Passer cisalpinus, *Tristr. Ibis*, 1859, p. 33; *E. C. Taylor, t. e.* p. 48; *Tristr. Ibis*, 1867, p. 369; *Irby, Ibis*, 1872, p. 201; *id. B. Gibr.* p. 119 (1875); *C. B. Wharton, Ibis*, 1876, p. 25.

Passer domesticus italicus, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 629 (1870).

Adult male. Differs from *P. domesticus* in its chestnut head. Similar to *P. hispaniolensis*, but with the back chestnut streaked with black, this colour confined to the upper back and mantle; the lower back, rump, and upper tail-coverts brown; facial markings as in *P. hispaniolensis*; under surface of body dull white, brown on the flanks, with no stripes; the black confined to the throat, and not

extending beyond the fore neck. Total length 6 inches, culmen 0·55, wing 3, tail 2·15, tarsus 0·75.

The winter plumage is, as in other Sparrows, confined to the obscuring of the summer plumage by sandy-buff edges to the feathers, which are shed in the following spring.

Obs. It is quite possible that the specimen recorded from Spain may have come from some other habitat of the present species; but Dr. Adams's specimen from Malta proves its occurrence in that island, in spite of Mr. Dresser's doubts (B. Eur. *l. c.*). The one from N. Africa in Mr. Gould's collection is typical, but a Tripoli specimen is somewhat intermediate and has some black centres to the flank-feathers, showing an approach to *P. hispaniolensis**.

Hab. Southern Europe; S.E. France; Italy; Malta; Northern Africa; Palestine and North-eastern Africa.

a. ♂ ad. sk.	[Spain (*Capt. Cook*).]	Gould Coll.
b. ♂ ad. sk.	Tuscany, Italy, Dec.	Professor Giglioli [P.].
c. ♂ ad. sk.	Tuscany, Italy, Jan.	Professor Giglioli [P.].
d. ♂ ad. sk.	Genoa, Aug. 30 (*H. Saunders*).	Hume Coll.
e. ♂ ad. sk.	Italy.	Gould Coll.
f. ♂ ad. sk.	Rome (*P. L. Sclater*).	Gould Coll.
g. ♂ ad. sk.	Ajaccio, Corsica, May.	C. Bygrave Wharton, Esq. [P.].
h. ♂ ad. sk.	Malta, "breeding," Jan. 25 (*Dr. A. L. Adams*).	Gould Coll.
i. ♂ ad. sk.	Tripoli.	Gould Coll.
k. ♂ ad. sk.	N. Africa (*ex Verreaux*).	Gould Coll.

5. **Passer pyrrhonotus.** (Plate V.)

Passer pyrrhonotus, *Blyth, J. A. S. Beng.* xiii. p. 946 (1844); *id. Cat. B. Mus. As. Soc.* p. 119 (1849); *Bp. Consp.* i. p. 508 (1850); *Jerd. B. Ind.* ii. p. 365 (1863); *Blyth, Ibis*, 1868, p. 354; *Gray, Hand-l. B.* ii. p. 85, no. 7272 (1870); *Hume, Str. F.* 1873, p. 209, 1879, p. 107, 1880, pp. 232, 442; *Scrope Doig, Str. F.* 1880, p. 280; *Murray, Vertebr. Faun. Sind*, p. 184 (1884).

Adult male. General colour above chestnut, the feathers edged with ashy brown, the mantle and scapular-feathers yellowish buff externally, with conspicuous black central streaks; lesser wing-coverts chestnut; median coverts black, broadly tipped with white, with more or less chestnut on the outer web; greater coverts blackish, externally chestnut or rufous, and buffy whitish at tips; bastard-wing and primary-coverts black, fringed with brown; quills blackish brown, edged with rufous, the primaries with an indentation of buff margin near the base of the outer web and a second smaller one at about one third of the distance from the tip; upper tail-

* In Mr. C. Wright's collection of Maltese birds are examples both of *P. italiæ* and *P. hispaniolensis* in full breeding-plumage. He possesses also several specimens with slightly striped flanks, evidently hybrids between the two species. This accounts for the opinion expressed by Mr. Wright (Ibis, 1864, p. 51) that there was a perfect gradation between *P. italiæ* and *P. hispaniolensis* in Malta.

coverts ashy brown, with dusky centres, and contrasting with the chestnut of the lower back and rump; tail-feathers dark brown, edged with ashy fulvous; crown of head and hind neck ashy grey, rather browner on the latter; lores and eyelid blackish, the former surmounted by a whitish streak continued into a broad chestnut eyebrow, which widens out on the sides of the neck; ear-coverts ashy grey; cheeks white, forming a streak, broadening on the sides of the neck; throat black, slightly hidden by greyish margins to the feathers; remainder of under surface white; the fore neck and breast pale ashy; flanks pale brown; thighs white; under tail-coverts white, with ashy-brown centres; under wing-coverts and axillaries white; quills below dusky, the inner edge ashy whitish: "bill deep dusky brown, only the base of the mandible with a faint fleshy tinge; tarsi and toes dusky fleshy brown; iris light brown; eyelids leaden slaty" (*Scrope Doig*). Total length 5·3 inches, culmen 0·4, wing 2·6, tail 2·15, tarsus 0·65.

Adult female. Differs from the male in wanting the chestnut on the back and being altogether browner, the upper surface being brown, rather more ashy on the head, neck, and upper tail-coverts; the mantle-feathers externally fulvescent and broadly streaked with black; lesser wing-coverts brown, with a slightly reddish tinge; the wings otherwise as in the male, but without so much rufous, the edges being more ochreous buff; tail as in male, but paler brown; lores dusky; ear-coverts ashy, with a brown streak along the upper margin, and surmounted by a broad eyebrow of isabelline; cheeks, throat, and abdomen white, the fore neck and breast as well as the sides of the breast and flanks pale ashy. Total length 5 inches, culmen 0·4, wing 2·55, tail 1·95, tarsus 0·65.

Hab. Sind.

a, b. ♂ ♀ ad. sk.	Eastern Narra, Aug. 1880 (*Scrope Doig*).	Hume Coll.
c. ♂ ad. sk.	Eastern Narra, Oct. 1880 (*Scrope Doig*).	Hume Coll.
d–p. ♂ ad.; *q–w.* ♀ ad. sk.	Eastern Narra, Dec. 1880 (*Scrope Doig*).	Hume Coll.
x. ♂ ad.; *y, z.* ♀ ad. sk.	Eastern Narra.	Scrope Doig, Esq. [P.].

6. Passer hispaniolensis.

Fringilla hispaniolensis, *Temm. Man. d'Orn.* p. 353 (1820); *Roux, Orn. Prov.* pl. 84 (1825); *Savi, Orn. Tosc.* ii. p. 106 (1829).
Fringilla cisalpina (*nec Temm.*), *Audouin, Expl. somm.* 8vo, p. 367 (1825).
Fringilla espaniolensis, *Werner, Atlas, Granivores,* pl. 41 (1827).
Fringilla salicicola, *Vieill. Faune Franç.* p. 417 (1828).
Pyrgita hispanica, etc., *Brehm, Vög. Deutschl.* p. 266 (1831).
Pyrgita hispaniolensis, *Rüpp. Neue Wirb.* p. 100 (1835–40); *Gould, B. Eur.* iii. pl. 185. fig. 1 (1837); *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Pyrgita salicaria, *Bp. Comp. List B. Eur. & N. Amer.* p. 30 (1838).
Passer salicarius, *Keys. u. Blas. Wirb. Eur.* p. xl (1840); *Mühle,*

Orn. Griechenl. p. 44 (1844); *Schl. Rev. Crit.* p. lxiv (1844); *Blyth, Cat. B. Mus. As. Soc.* p. 119 (1849); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 129 (1859); *Linderm. Vög. Griechenl.* p. 58 (1860); *Tristr. Ibis*, 1859, p. 293; *Sperling, Ibis*, 1864, p. 381; *Blyth, Ibis*, 1867, p. 42; *Tristr. t. c.* p. 369; *Wyatt, Ibis*, 1870, p. 16; *Fritsch, Vög. Eur.* tab. 20. fig. 20 (c. 1870); *Dohrn, J. f. O.* 1871, p. 6; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Hume, Str. F.* 1873, p. 114; *Dresser, Ibis*, 1875, p. 239; *Blanf. East. Pers.* ii. p. 255 (1876); *Bogd. B. Cauc.* p. 60 (1879); *Seebohm, Ibis*, 1883, p. 9.

Passer hispaniolensis, *Rüpp. Syst. Uebers.* p. 78 (1845); *Degl. et Gerbe, Orn. Eur.* i. p. 244 (1867); *Saunders, Ibis*, 1869, p. 173; *Elwes & Buckley, Ibis*, 1870, p. 192; *Dresser, B. Eur.* iii. p. 593, pl. 177 (1876); *Butler, Cat. B. Sind etc.* p. 46 (1879); *Biddulph, Ibis*, 1881, p. 79; *Scully, t. c.* p. 573; *C. Swinh. Ibis*, 1882, p. 113; *Dixon, t. c.* p. 574; *Salvin, Cat. Strickl. Coll.* p. 210 (1882); *Tristr. Faun. & Flor. Palest.* p. 67 (1884); *Giglioli, Avif. Ital.* p. 24 (1886).

Passer salicicolus, *Bp. Consp.* i. p. 509 (1850); *Cab. Mus. Hein.* Th. i. p. 155 (1850); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 501 (1856); *Tristr. Ibis*, 1859, p. 33; *E. C. Taylor, t. c.* p. 48; *Salvin, t. c.* p. 314; *Jerd. B. Ind.* ii. p. 364 (1863); *Wright, Ibis*, 1863, p. 436; *Adams, Ibis*, 1864, p. 22; *Wright, t. c.* p. 51; *Allen, t. c.* p. 239; *Lilford, Ibis*, 1866, p. 182; *Keulem. N. T. Dierk.* 8vo, iii. p. 370 (1866); *Loche, Expl. Sci. Algér.* i. p. 134 (1867); *Chambers, Ibis*, 1867, p. 99; *Doderl. Avif. Sicil.* p. 74 (1869); *Wright, Ibis*, 1869, p. 251; *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 630 (1870); *Gray, Hand-l. B.* ii. p. 86, no. 7260 (1870); *Hume, Ibis*, 1870, p. 529; *Salvad. Faun. Ital., Ucc.* p. 148 (1871); *Saunders, Ibis*, 1871, p. 218; *Sharpe, Cat. Afr. B.* p. 69 (1871); *Godman, Ibis*, 1872, p. 210; *Shelley, B. Egypt*, p. 149 (1872); *Brooke, Ibis*, 1873, p. 246; *Hume, Str. F.* 1873, p. 209; *Adam, t. c.* p. 387; *Hume, Str. F.* 1875, p. 219; *Lilford, Ibis*, 1875, p. 17; *Scully, Str. F.* 1876, p. 164; *Danf. Ibis*, 1878, p. 22; *Taylor, t. c.* p. 371; *Hume, Str. F.* 1879, p. 107; *Wardlaw Ramsay, Ibis*, 1880, p. 64; *Chapm. Ibis*, 1884, p. 77; *Murray, Vertebr. Faun. Sind*, p. 183 (1884); *Rochebr. Faun. Sénég., Ois.* p. 258 (1885); *Salvad. Elench. Ucc. Ital.* p. 168 (1887).

Passer rueppelli, *Bp. Consp.* i. p. 510 (1850); *Gray, Hand-l. B.* ii. p. 86, no. 7273 (1870).

Pyrgita cahirinus, *Heugl., teste Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 630 (1870).

Adult male in breeding-plumage. General colour above black, streaked with creamy-white edges to the feathers; rump ashy brown; scapulars like the back; lesser wing-coverts chestnut; median coverts white, forming a broad wing-bar; greater coverts blackish, externally rufous; bastard-wing blackish; primary-coverts blackish, edged with ashy brown; quills blackish brown, edged with pale rufous, the primaries with ashy brown, inclining to white towards the ends, and having a small speculum caused by the whitish edges to the base of the primaries: upper tail-coverts dusky brown, with ashy-brown margins; tail-feathers dusky brown, margined with ashy fulvous; crown of head deep chestnut, extending on to the hind neck; lores and eyelid blackish, surmounted by a

narrow line of white; cheeks, ear-coverts, and side of neck white, with a narrow black line along the upper edge of the ear-coverts; malar line, throat, and chest black, as also the sides of the breast, these varied with whitish edges to the feathers; breast and abdomen whitish; sides of body ashy, broadly streaked with black centres to the feathers, the lower flanks and thighs browner; under tail-coverts dull white, with pale brown centres to the feathers; axillaries and under wing-coverts dull white, the former slightly tinged with yellow; quills pale ashy brown below, ashy fulvous along the inner web. Total length 5·7 inches, culmen 0·55, wing 3·1, tail 2·1, tarsus 0·75.

Adult female. Different from the male. Above brown, the feathers of the mantle and back edged with whity brown and broadly streaked with black; the lower back, rump, and upper tail-coverts ashy brown; lesser wing-coverts ashy brown; median coverts black, edged with white; remainder of the wings and tail as in the male, but the margin brown instead of chestnut; head and hind neck ashy brown; sides of face, ear-coverts, and cheeks also ashy brown, with a small whitish mark below the eye, and a narrow eyebrow of dull whitish; under surface of body ashy brown, mottled with dusky centres to the feathers; the lower throat more strongly mottled with blackish; chin and sides of throat pale creamy buff or buffy white; abdomen creamy white, with narrow shaft-lines of brown; the flanks browner, with dusky brown centres; thighs brown; axillaries and under wing-coverts dull whitish, with ashy-brown bases. Total length 5·3 inches, culmen 0·55, wing 3, tail 2·1, tarsus 0·8.

In *winter plumage* the male is much more sandy buff than in summer, the light streaks of the back being creamy buff; the chestnut head is obscured by sandy-buff margins to the feathers; the white of the face obscured by a shade of sandy buff; the black throat entirely hidden by sandy-whitish tips to the feathers; wings and tail as in summer, but the light margins much broader, and the white wing-bar obscured by a tinge of sandy buff.

A good deal of variation in the amount of the black striping on the flanks exists in a large series.

Hab. Southern Europe and Northern Africa generally. Canary and Cape Verde Islands. Eastwards through Persia to Turkestan and Yarkand, Afghanistan and North-western India, as far as the Etawah district in winter.

a, b. ♂ ♀ ad. sk.	El Djem, Tunis, March 1 (*O. S.*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Tunis.	Gould Coll.
d, e. ♂ ad.; *f.* ♀ ad. sk.	Tunis.	L. Fraser [C.].
g. ♂ ad. sk.	Algeria.	Purchased.
h. ♂ ad. sk.	Cape Verde Islands (*Keulemans*).	Sharpe Coll.
i. ♂ ad. sk.	S. Iago, Cape Verde Islands (*C. Darwin*).	Gould Coll.
k, l. ♂ ♀ ad. sk.	Cape Verde Islands.	M. A. Bouvier [P.].

m, *n*. ♂ ♀ ad. sk.	Canary Islands (*Temple Godman*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Granada, Spain, April.	Howard Saunders, Esq. [P.].
p. ♂ ad. sk.	Seville, Spain.	Howard Saunders, Esq. [P.].
q. ♂ ad. sk.	Malta, Sept. (*Dr. A. L. Adams*).	Gould Coll.
r. ♂ ad. sk.	Malta, May 23 (*Dr. A. L. Adams*).	Gould Coll.
s, *s'*. ♂ ♀ ad. sk.	Malta, Feb. 5 (*J. G.*).	Gould Coll.
t. ♂ ad. sk.	Sardinia, April 1 (*A. B. Brooke*).	R. B. Sharpe, Esq. [P.].
u, *v*. ♂ ♀ ad. sk.	Turkey, May 5 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
w. ♂ ad. sk.	Guiksu, Turkey, April 21 (*T. Robson*).	Gould Coll.
x. ♀ ad. sk.	Turkey, March (*T. Robson*).	Gould Coll.
y. ♂ ad. sk.	Buyukdere Valley, Turkey, May 3 (*T. Robson*).	R. B. Sharpe, Esq. [P.].
z. ♂ ad. sk.	Smyrna (*Krüper*).	Consul Merlin [P.].
a'. ♂ ad. sk.	Smyrna (*Huet de Pavillon*).	Gould Coll.
b', *c'*. ♂ ♀ ad. sk.	Palestine.	Canon Tristram [C.].
d'. ♂ ad. sk.	Benha, Egypt, Dec. 24 (*S. Stafford Allen*).	Gould Coll.
e'. ♂ ad. sk.	Beershems, Delta, Egypt, Jan. 14.	J. H. Gurney, Esq., Jun. [P.].
f'. ♂ ad. sk.	Nubia.	Dr. A. Leith-Adams [P.].
g'. ♂ ad. sk.	Yarkand, June 8, 1875 (*Dr. J. Scully*).	Hume Coll.
h'. ♂ ad. sk.	Bampusht, Baluchistan, Feb. 27.	W. T. Blanford, Esq. [C.].
i', *k'*. ♂ ad. sk.; *k''*. ♀ ad.	Karobagh, W. Afghanistan, March 29, 1884.	Dr. Aitchison [C.].
l', *m'*, *n'*. ♂ ad.; *o'*, *p'*, *p''*. ♀ ad. sk.	Candahar, April.	Col. Swinhoe [C.].
q', *r'*. ♂; *s'*. ♀ ad. sk.	Candahar, April 11, 1864 (*Sir O. St. John*).	Hume Coll.
t', *u'*. ♂ ♀ ad. sk.	Pushut (*Griffith*).	India Museum.
v', *w'*. ♀; *x'*. ♂ ad. sk.	Shikarpore, Sind (*Griffith*).	India Museum.
y'. ♂ ad. sk.	Near Taj, Sind, Dec. 16, 1871 (*A. O. H.*).	Hume Coll.
z'. ♂ ad. sk.	Jhurruk, Sind, Jan. 2, 1875.	Hume Coll.
α. ♂ ad. sk.	Peshawur.	Hume Coll.
β. ♂ ad. sk.	Peshawur.	Colonel Way [P.].
γ–*ξ*. ♂ ad.; *o*–*χ*. ♀ ad. sk.	Sirza district, Punjab, Dec. 1867.	Hume Coll.
ψ. ♂ ad. sk.	Rohtuk district, Feb. 6, 1869.	Hume Coll.
ω, *a'*, *β'*. ♂ ad. sk.	Cashmere, Aug. 1870.	Hume Coll.
γ'. ♀ ad. sk.	Dehra, May 10, 1870 (*Dr. G. King*).	Hume Coll.
δ'. ♀ ad. sk.	Etawah, Nov. 25, 1869.	Hume Coll.
ϵ'–*κ'*. ♂; *λ'*, *μ'*, *ν'*. ♀ ad. sk.	Paphoond, Etawah, Jan. 20, 1872 (*W. E. Brooks*).	Hume Coll.
ξ'. ♂ ad. sk.	Shah-gung, Mirzapur district, March (*R. Thompson*).	Hume Coll.

7. Passer insularis.

Passer insularis, *Sclater & Hartl. P. Z. S.* 1881, p. 169, pl. 16.

Adult male. Above ashy brown, broadly streaked with black on the mantle and back; scapulars bay or ashy, edged with bay; lesser wing-coverts light bay; median and greater wing-coverts dusky brown, edged with rufous-brown; bastard-wing and primary-coverts uniform dark brown; wings dark brown, edged with paler brown, the inner secondaries with rufous; upper tail-coverts ashy brown; tail-feathers brown, edged with whity brown; crown of head uniform ashy grey; a broad eyebrow of cinnamon-rufous, widening out on the sides of the neck; lores, feathers round the eye, and a broad streak along the upper ear-coverts white; sides of neck ashy grey; throat black; remainder of under surface of body ashy grey, whiter in the centre of the breast and abdomen; under tail-coverts ashy brown, edged with white; under wing-coverts and axillaries ashy, edged with whitish. Total length 5·8 inches, culmen 0·6, wing 3·05, tail 2·25, tarsus 0·85.

Adult female. Browner than the male and not so grey, wanting also the rufous eyebrow and sides of neck; lesser wing-coverts reddish brown, not chestnut; no black on the throat. Total length 5·5 inches, culmen 0·6, wing 2·9, tail 2·3, tarsus 0·75.

Hab. Island of Socotra.

a. ♀ ad. sk.	Socotra (*I. B. Balfour*).	Brit. Association [P.].
b, c. ♂ ad.; *d.* ♀ ad. sk.	Socotra (*I. B. Balfour*).	Brit. Association [P.]. (Types of species.)

8. Passer moabiticus.

Passer moabiticus, *Tristr. P. Z. S.* 1864, p. 169; *id. Ibis*, 1867, p. 370, pl. vii. 1868, p. 333; *id. Faun. & Flor. Palest.* p. 68, pl. ix. figs. 3, 4 (1884).

Adult male (type of species). General colour above sandy brown, concealing the grey plumage underneath; mantle and upper back sandy buff, streaked with black; lower back, rump, and upper tail-coverts uniform sandy brown; lesser wing-coverts black, the lower ones creamy white, forming a band; median and greater coverts chestnut, edged with creamy buff, broader on the latter series, which have black bases; bastard-wing blackish; primary-coverts and quills blackish, edged with sandy brown, whitish near the base and towards the ends of the primaries, with an intermediate blackish patch; inner secondaries mesially black; upper tail-coverts more sandy buff than the rump; tail-feathers blackish, with sandy-brown edges; crown of head and hind neck entirely obscured by sandy-brown edges to the feathers; lores dusky; a distinct dull white eyebrow, continued in a broad streak of pale tawny above the ear-coverts; behind the eye a blackish spot; ear-coverts ashy grey, like the sides of the neck; feathers below the eye and cheeks white, the latter forming a broad streak, followed by a patch of sulphur-yellow on the sides of the lower throat; the latter black, extending to the

fore neck; chest and remainder of under surface ashy, whiter on the abdomen; the sides of the body and flanks more isabelline brown; thighs black; under tail-coverts isabelline, with chestnut bases to the feathers; under wing-coverts and axillaries pale isabelline; quills below dusky, ashy whitish on the inner web. Total length 4·8 inches, culmen 0·35, wing 2·4, tail 1·7, tarsus 0·6. (*Mus. H. B. Tristram.*)

Adult female. General colour pale ashy brown, the feathers of the mantle and upper back mesially streaked with blackish brown and edged with sandy buff; rump and upper tail-coverts uniform ashy brown; lesser wing-coverts like the hind neck; median series black, broadly tipped with tawny buff and margined with sandy buff; greater coverts blackish, edged with ashy brown and sandy buff; bastard-wing, primary-coverts, quills, and tail-feathers dark brown, edged with ashy brown; the secondaries with sandy brown; crown of head and hind neck as well as the sides of the neck uniform ashy brown, the lores and a tolerably broad eyebrow whitish, deepening into isabelline above the ear-coverts; feathers below the eye whitish; ear-coverts ashy; on the sides of the neck a patch of pale yellow; throat dull ashy white, as also the breast and abdomen; breast, sides of body, flanks, and under tail-coverts light brown; under tail-coverts deep isabelline; axillaries and under wing-coverts isabelline; quills dusky below, ashy isabelline along the inner web. Total length 4·5 inches, culmen 0·4, wing 2·3, tail 1·5, tarsus 0·6.

Hab. Palestine.

a. ♀ ad. sk. Ain Terabeh, Dead Sea. Canon Tristram [P.].

9. Passer yatii*.

Adult male in winter plumage. General colour above light chestnut, obscured by ashy yellow, the feathers of the upper back centred with black; lower back and rump isabelline, washed with yellow; lesser wing-coverts black; median coverts black, broadly tipped with creamy white; the inner median and all the greater coverts bright chestnut, tipped with creamy white; bastard-wing black; primary-coverts blackish, edged with ashy; quills blackish, edged with whity brown on the primaries, broader and more isabelline near the base of the outer primaries, the secondaries margined with rufous isabelline, with a conspicuous broad black centre to the innermost secondaries; upper tail-coverts ashy isabelline, with dusky centres; tail-feathers blackish brown, rather broadly edged with clear isabelline; crown of head and hind neck ashy isabelline, concealing grey bases to the feathers, which are probably ashy grey in summer; lores black, surmounted by a narrow line of whitish, joining a distinct eyebrow of pale tawny rufous or light cinnamon, which extends to the sides of the neck; feathers below the eye white; ear-coverts dark ashy grey; cheeks white, continued into a broad yellow streak on each side of the throat, which is black,

* Named, by Dr. Aitchison's desire, after Captain Yate, a member of the Afghan Boundary Commission.

obscured with ashy margins; sides of neck ashy isabelline like the hind neck; fore neck black like the throat; chest and remainder of under surface of body pale yellow, obscured with ashy, the sides of body and flanks ashy brown, washed with yellow; thighs black, with whitish edgings; under tail-coverts deep isabelline; under wing-coverts white, the edge of the wing mottled with black bases to the feathers; axillaries yellow; quills below dusky, ashy whitish along the edge of the inner web. Total length 4·8 inches, culmen 0·4, wing 2·5, tail 1·8, tarsus 0·65.

Hab. Western Afghanistan.

a. ♂ ad. sk.	Dedadi.	Dr. Aitchison [C.].

10. Passer jagoensis*.

Pyrgita jagoensis, *Gould, P. Z. S.* 1837, p. 77.
Passer jagoensis, *Gould, Voy. 'Beagle,' Birds*, p. 95, pl. xxxi. (1841); *Bp. Consp.* i. p. 510 (1850); *Dohrn, J. f. O.* 1871, p. 6; *Gray, Hand-l. B.* ii. p. 86, no. 7268 (1870).
Passer erythrophrys, *Bp. Consp.* i. p. 510 (1850, *ex Temm. MSS.*); *Hartl. Orn. W.-Afr.* p. 150 (1857); *Keulem. N.T. Dierk.* 8vo, iii. p. 370 (1866); *Gray, Hand-l. B.* ii. p. 86, no. 7274 (1870).

Adult male. General colour above cinnamon-rufous or chestnut, the feathers of the mantle and upper back edged with ashy brown and streaked with black: lower back and rump uniform cinnamon-rufous; lesser wing-coverts and scapulars uniform cinnamon-rufous; median coverts white with black bases, forming a wing-bar; greater coverts dark brown, edged externally with rufous, with the tips fulvescent; bastard-wing and primary-coverts blackish brown, fringed with ashy rufous; quills dark brown, edged with fulvous brown, the primaries with paler margins, especially at the base of these quills, where a small speculum is formed, and about halfway up the quills, where the margins are conspicuously broader and lighter; upper tail-coverts ashy brown; tail-feathers brown, edged with ashy brown; crown of head dark ashy; hind neck ashy brown; lores and feathers round the eye black, surmounted by a narrow white line, which is followed by a broad streak of orange-rufous, which runs from above the eye to the sides of the neck; cheeks and ear-coverts dull white, with a dusky blackish streak along the upper edge of the latter; throat black; remainder of under surface of body from the fore neck downwards pale ashy, darker on the sides of the body and flanks; centre of breast, abdomen, and under tail-coverts white, the latter with light brown centres; axillaries and under wing-coverts dull white; quills dusky brown below, ashy along the edge of the inner web. Total length 5·1 inches, culmen 0·5, wing 2·6, tail 2·15, tarsus 0·7.

* Dr. Oustalet has described a female Sparrow from the island of Branco, in the Cape-Verde group, as *Passer brancoensis* (Ann. Sci. Nat. Zool. (6) xvi. art. 5, p. 2, 1883). The characters for distinction do not seem to be strongly pronounced.

Adult female. Different from the male. Brown above, with whity-brown edges to the feathers of the mantle, which have blackish-brown centres; the lower back and rump uniform reddish brown; upper tail-coverts a little more ashy; lesser wing-coverts and scapulars reddish brown; median coverts blackish, tipped with white, forming a wing-bar: greater coverts dusky brown, edged with reddish brown, ashy whitish at the ends; quills and tail otherwise as in the male; crown of head dull ashy brown, the feathers streaked with dusky brown; a broad eyebrow of creamy buff, whitish above the lores; ear-coverts pale brown, darker along the upper margin; cheeks and under surface of body dull white, ashy on the breast, and rather browner on the flanks, thighs, and under tail-coverts. Total length 5 inches, culmen 0·55, wing 2·3, tail 1·8, tarsus 0·7.

Hab. Cape Verde Islands.

a. ♂ ad. sk.	S. Iago (*C. Darwin*).	J. Gould, Esq. (Type of species.)
b. ♂ ad. sk.	S. Iago (*C. Darwin*).	Gould Coll.
c, d. ♂ ad. et jun. sk.	S. Vincent.	L. Fraser [C.].
e, f. ♂ ♀ ad. sk.	Cape Verde Islands.	M. A. Bouvier [P.].
g, h. ♂ ad. sk.	Cape Verde Islands.	Sir E. Sabine [P.].

11. Passer motitensis.

Passer motitensis, *Smith, Ill. Zool. S. Afr., Birds,* pl. 114 (1849); *Bp. Consp.* i. p. 510 (1850); *Layard, B. S. Afr.* p. 204 (1867); *Gurney, Ibis,* 1868, p. 268; *Layard, Ibis,* 1869, p. 79; *Gray, Hand-l. B.* ii. p. 86, no. 7262 (1870); *Sharpe, Cat. Afr. B.* p. 69 (1871); *Gurney in Anders. B. Dam.-Ld.* p. 187 (1872); *Sharpe, in Oates' Matabele-Land,* App. p. 320 (1881); *id. ed. Layard's B. S. Afr.* p. 480 (1884).

Adult male. General colour above pale cinnamon-rufous, the mantle and scapulars streaked with black centres to the feathers, the lower back and rump uniform; upper tail-coverts ashy brown, slightly washed with cinnamon; lesser wing-coverts cinnamon like the back; median wing-coverts blackish, tipped with white, forming a wing-bar; greater series blackish, edged with cinnamon-buff, whitish at the ends; bastard-wing, primary-coverts, and quills dusky blackish, margined with pale cinnamon-rufous, broader on the secondaries; tail-feathers dark brown, margined with paler brown; crown of head and hind neck pale pearly grey; over the lores a small white spot, continued in a broad eyebrow of pale cinnamon, widening out on the sides of the neck; lores and lower margin of eyelid black, continued in a line along the upper part of the ear-coverts, which are pale ashy; the cheeks purer white, forming a streak which widens out on the sides of the neck; throat and fore neck black; chest and remainder of underparts white, slightly shaded with ashy on the breast, the flanks and sides of body perceptibly browner; under tail-coverts white; axillaries fulvous; under wing-coverts white, with dusky bases; quills dusky below,

ashy along the inner web: "bill liver-brown; legs and toes like the bill, but paler; iris dark brown" (*C. J. Andersson*). Total length 6·1 inches, culmen 0·6, wing 3·25, tail 2·35, tarsus 0·85.

Adult female. Duller in colour than the male. Fulvous-brown on the back, streaked with black; the wings and tail, as well as the lower back, rump, and upper tail-coverts like the male; head and hind neck brown instead of ashy; sides of face dull whitish, the cheeks purer white; lores and a streak above the ear-coverts brown, surmounted by a broad eyebrow of pale ochreous buff; under surface of body pale brown, the throat blackish; the abdomen and under tail-coverts white. Total length 6·2 inches, culmen 0·6, wing 3·25, tail 2·2, tarsus 0·8.

Hab. South Africa, from the interior to Matabele-Land on the east and Damara-Land on the west.

a. ♂; *b*, *c*. ♀ ad. sk.	South Africa.	Sir A. Smith [C.]. (Types of species.)
d. ♀ ad. sk.	Tati, Matabele-Land, Sept. 24 (*F. Oates*).	W. E. & C. G. Oates, Esqrs. [P.].
e, *f*. ♂ ad. sk.	Tati, Oct. (*F. Oates*).	W. E. & C. G. Oates, Esqrs. [P.].
g. ♀ ad. sk.	Palatswie River, Shoshong, Aug. 1 (*F. Oates*).	W. E. & C. G. Oates, Esqrs. [P.].
h. ♂ ad. sk.	Damara-Land, Jan. 12 (*C. J. Andersson*).	Sharpe Coll.
i. ♀ ad. sk.	Otjimbinque, Oct. 2 (*C. J. Andersson*).	Sharpe Coll.

12. Passer ruficinctus.

Fringilla (Passer) motitensis, *Heugl. Syst. Uebers.* p. 42 (1856).
Passer motitensis (*nec Smith*), *J. f. O.* 1862, p. 30, 1868, p. 86; *id. Orn. N.O.-Afr.* i. pt. 2, p. 643 (1870).
Passer rufocinctus, *Fischer u. Reichen. J. f. O.* 1884, p. 55; *Fischer in Madarász, Zeitschr. ges. Orn.* i. p. 319 (1884).

Adult. Closely allied to *P. motitensis*, but with the ear-coverts grey like the crown, not white. Total length 5·5 inches, culmen 0·4, wing 3·2, tail 2, tarsus 0·75.

Hab. Masai-Land in Eastern Africa to Kordofan in North-eastern Africa.

13. Passer cinnamomeus.

Pyrgita cinnamomea *Gould, P. Z. S.* 1835, p. 185; *Blyth, J. A. S. Beng.* xi. p. 108 (1842); *Licht. Nomenel. Av. Berol.* p. 47 (1854).
Passer cinnamomeus, *Blyth, J. A. S. Beng.* xiii. p. 947 (1844); *id. Cat. B. Mus. As. Soc.* p. 119 (1849); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 508 (1850); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 500 (1856); *Jerd. B. Ind.* ii. p. 365 (1862); *Blyth, Ibis*, 1867, p. 42; *Beavan, t. c.* p. 138; *Stoliczka, J. A. S. Beng.* xxxvii. p. 57 (1868); *Beavan, Ibis*, 1868, p. 174; *Pelz. t. c.* p. 318; *Gray, Hand-l. B.* ii. p. 86, no. 7265 (1870); *Swinh. P. Z. S.* 1871, p. 386; *Hume and Henders. Lahore to Yark.* p. 252, pl. 25 (1873);

Hume, Nests & Eggs Ind. B. p. 459 (1873); *Cock & Marsh. Str. F.* 1873, p. 357; *Brooks, Str. F.* 1875, p. 254; *Anderson, Zool. Exped. Yunnan*, p. 602 (1878); *Hume, Str. F.* 1879, p. 107; *Salvin, Cat. Strickl. Coll.* p. 210 (1882); *C. H. T. Marshall, Ibis*, 1884, p. 419.

Adult male. General colour above uniform cinnamon-rufous; the mantle slightly varied with a few black streaks on the end of the feathers, which are edged with fulvous; lesser wing-coverts cinnamon like the back; median wing-coverts white with black bases, forming a broad wing-bar; greater coverts blackish, edged with brown, inclining to whitish at the ends; bastard-wing and primary-coverts blackish, the latter fringed with brown; quills blackish brown, edged with ashy brown, the innermost secondaries with pale cinnamon; the primaries with a pale whitish speculum formed by the outer web at the base of these quills, which have also a minute edging of whitish at about a third of the distance from the tip; upper tail-coverts ashy brown; tail-feathers brown, edged with ashy brown; head uniform cinnamon; lores and feathers below the eye blackish, slightly dotted with white; cheeks and ear-coverts pale yellow, whiter towards the sides of the neck, the upper edge of the ear-coverts cinnamon like the head; throat black; remainder of under surface of body pale clear yellow, the sides of the body and flanks pale ashy brown; thighs ashy brown; axillaries and under wing-coverts pale sulphur-yellow; quills dusky below, pale ashy along the inner web. Total length 4·2 inches, culmen 0·45, wing 2·95, tail 1·8, tarsus 0·65.

The *adult male in winter plumage* differs from the summer plumage in having the chestnut of the upper surface obscured by sandy-buff edges, especially broad on the mantle and back, where the black streaks are much broader than in summer; there is also somewhat more yellow on the underparts.

The specimens from the North-west Himalayas are very much paler than those from Nepal, while those from Assam and Bootan are still darker than the latter. Both males and females partake of this peculiarity.

Adult female. Different from the male, and much browner; upper surface of body brown, the feathers of the mantle and back edged with sandy buff and broadly streaked with black; the lower back and rump dull rufous; upper tail-coverts ashy brown, with dusky centres; wings and tail as in the male, excepting that the lesser wing-coverts are rufous-brown instead of cinnamon; crown of head and neck dark brown, with a dusky line along the sides of the crown; lores ashy, surmounted by a streak of whitish, which is continued into a yellowish-white eyebrow; sides of face and ear-coverts yellowish white, with a blackish streak along the upper edge of the latter; the hinder cheeks and sides of neck clearer yellow; throat dusky blackish; remainder of under surface pale yellow, ashy brownish on the breast and sides of the body; thighs ashy brown; axillaries and under wing-coverts pale yellow, the latter with dusky bases; quills dusky below, ashy along the edge of the inner web. Total length 5·2 inches, culmen 0·5, wing 2·65, tail 1·9, tarsus 0·7.

Young. Resembles the old female, but is much more rufous-brown, the edges to the quills and tail-feathers being sandy rufous; eyebrow rufescent; underneath ashy, washed with yellow, clearer on the abdomen, the flanks slightly rufescent.

Hab. From Afghanistan and Sind throughout the Himalayas to Bootan, Assam, and, according to Swinhoe, to Southern China.

a–e. ♂ ad. sk.	Olipore, Afghanistan (*Griffith*).	India Mus.
f. ♂ ad. sk.	Near Goond, Sind Valley, May 24, 1871 (*W. E. Brooks*).	Hume Coll.
g. Ad. sk.	Peshawur.	Colonel Way [P.].
h. Ad. sk.	Murree.	Colonel Way [P.].
i. ♂ ad. sk.	Near Hirpur, Cashmere, May 13, 1871 (*W. E. Brooks*).	Hume Coll.
k. ♀ ad. sk.	Near Gulmerg, May 31, 1871 (*W. E. Brooks*).	Hume Coll.
l–o. ♂ ad. sk.; *p, q, r.* ♀ ad. sk.	Cashmere, Aug. 1870.	Hume Coll.
s. ♂ ad. sk.	Barahaut, May 25, 1871.	Hume Coll.
t, u. v. ♂ ad.; *w, x.* ♀ ad. sk.	Koteghur, near Simla.	Hume Coll.
y. ♂ ad. sk.	Koteghur, Dec. 21, 1870.	Hume Coll.
z. ♀ ad. sk.	Pumlahie, Kotegurh, Nov. 17, 1869.	Hume Coll.
a′. ♀ ad. sk.	Pujarli in Kotekhaie, Feb. 25, 1871.	Hume Coll.
b′, c′. ♂; *d′, e′.* ♀ ad. sk.	Simla.	Hume Coll.
f′. ♂ ad. sk.	Simla, July (*R. C. Beavan*).	Gould Coll.
g′, h′, i′. ♂ ad. sk.; *k′.* ♀ ad. sk.	Simla, Oct. 1878–80 (*W. Davison*).	Hume Coll.
l′–o′. ♀ ad. sk.; *p′, q′.* ♂ ad. sk.	Simla, Nov. 1880 (*W. Davison*).	Hume Coll.
r′. ♀ imm. sk.	Irunda, N.W. Himalayas, May 31, 1869.	Hume Coll.
s′, t′. ♂ ♀; *u′, v′.* ♂ ad. et imm. sk.	N.W. Himalayas.	Pinwill Coll.
w′, x′. ♂ ad.; *y′.* ♀ ad. sk.	Middle range of hills north of Masuri.	Hume Coll.
z′, a. ♂ ♀ ad. sk.	Derali, May 13, 1874 (*W. E. Brooks*).	Gould Coll.
β, γ. ♂ ♀ ad. sk.	Kumaon, Oct. 19, 1866.	Hume Coll.
δ. ♂ ad. sk.	Kumaon (*Strachey*).	India Mus.
ϵ, ζ. ♂; *η, θ.* ♀ ad. sk.	Nepal.	Hodgson Coll.
ι, κ. ♂ ♀ ad. sk.	Nepal (*B. H. Hodgson*).	India Mus.
λ, μ. ♂ ad. sk.	Thibet, Sept. 1874 (*L. Mandelli*).	Hume Coll.
ν, ξ. ♂ ad.; *o.* ♀ ad. sk.	Native Sikhim, May 1875 (*L. Mandelli*).	Hume Coll.
π, ρ, σ. ♂ ad. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
τ. ♂ ad. sk.	Sikhim, Apr. 1875 (*L. Mandelli*).	Hume Coll.
υ, φ. ♂ ad. sk.	Near Darjiling.	Hume Coll.
χ–γ′. ♂ ad. et jun.; *δ′, ϵ′, ζ′.* ♀ ad. sk.	Bootan (*Pemberton*).	India Mus.
η′, θ′. ♂ ♀ ad. sk.	Lower Hills, Bhootan Dooars, Feb. 1873 (*L. Mandelli*).	Hume Coll.

ι', *κ'*. ♂ ♀ ad. sk.	Bhootan Dooars, Jan. 1877 (*L. Mandelli*).	Hume Coll.
λ', *μ'*. ♂ ♀ ad. sk.	Bhootan Dooars, Feb. 1873–77 (*L. Mandelli*).	Hume Coll.
ν'. ♀ ad. sk.	Bhootan Dooars, Dec. 1876 (*L. Mandelli*).	Hume Coll.
ξ'. ♂ ad. sk.	Shillong (*J. Cockburn*).	Hume Coll.
o'. ♂ ad. sk.	Shillong, Aug. 1877 (*J. Cockburn*).	Hume Coll.
π'. ♂ ad. sk.	Shillong, Oct. 10, 1877 (*J. Cockburn*).	Hume Coll.
ρ'. ♂ ad. sk.	Shillong, Nov. 1877 (*J. Cockburn*).	Hume Coll.
σ', *τ'*. ♂ ad. sk.; *υ'*. ♀ ad. sk.	Aimole, Manipur, April 1881 (*A. O. H.*).	Hume Coll.
φ', *χ'*. ♂ ♀ ad. sk.	Machi, Manipur, May 2, 1881 (*A. O. H.*).	Hume Coll.
ψ', *ω'*. ♂ ♀ ad.; *a*. ♀ juv. sk.	Momien, Yun-nan, June.	Dr. Anderson [C.].
b, *c*. Ad. sk.	Himalayas.	Gould Coll.
d, *e*. ♂ ♀ ad. st.	India.	Purchased.
f. ♂ ad. st.	India.	J. R. Reeves, Esq. [P.].

14. Passer castanopterus.

Passer castanopterus, *Blyth*, *J. A. S. Beng.* xxiv. p. 302 (1855); *Speke*, *Ibis*, 1860, p. 246; *Gray*, *Hand-l. B.* ii. p. 86, no. 7275 (1870); *Heugl. Orn. N.O.-Afr.* pt. 2, p. 633 (1870); *Finsch & Hartl. Vög. Ostafr.* p. 442 (1870); *Oust. N. Arch. Mus.* (2) ii. *Bull.* p. 141 (1879).

Adult male. General colour above ashy brown with an olive tinge, the mantle and upper back streaked with black centres to the feathers, which are margined with whity brown; lower back, rump, and upper tail-coverts uniform ashy olive; scapulars and entire wing-coverts uniform bay or light chestnut; bastard-wing and primary-coverts brown, darker towards the ends and fringed with rufous: quills brown, edged with lighter brown, more rufous on the inner secondaries, the outer primaries whity brown near the base and near the ends of the outer webs, the dark brown of the quills reaching to the edge in the middle of the feather; tail-feathers dark brown, edged with light brown; crown of head and nape uniform light chestnut, reaching to the sides of the neck, which are otherwise ashy olive; lores, feathers below the eye, and a streak along the upper ear-coverts pale sulphur-yellow, as well as the cheeks; fore part of cheeks, throat, and fore neck black; remainder of under surface bright yellow, ashy olive on the breast and sides of the body; under tail-coverts yellowish white, with light brownish bases; axillaries and under wing-coverts yellowish white; quills below dusky, ashy along the inner web. Total length 5·2 inches, culmen 0·3, wing 2·9, tail 1·9, tarsus 0·7. (*Mus. Paris.*)

Hab. Somali-Land, East Africa; ? Gaboon, in West Africa.

15. Passer rutilans.

Passer rutilans, *Temm. Pl. Col.* iii. pl. 488. fig. 2 (1835); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 508 (1850); *Gray, Hand-l. B.* ii. p. 86, no. 7264 (1870); *Swinh. P. Z. S.* 1871, p. 386: *id. Ibis*, 1877, p. 145; *David & Oust. Ois. Chine*, p. 341 (1877); *Blakist. & Pryer, B. Japan*, p. 172 (1882); *Blakist. Amended List B. Japan*, p. 17 (1884).

Passer russatus, *Temm. & Schl. Faun. Japon., Aves*, p. 90, pl. 50 (1850); *Swinh. Ibis*, 1861, p. 45; *Blakist. Ibis*, 1862, p. 328; *Swinh. Ibis*, 1863, p. 378, 1866, p. 295; *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871).

Adult male. General colour above deep chestnut, the upper back and scapulars streaked with black centres to the feathers, which are also narrowly edged with creamy buff; lesser wing-coverts chestnut like the back; median coverts black, broadly tipped with white; greater coverts black, edged with reddish brown, whiter towards the ends; bastard-wing and primary-coverts blackish, edged with reddish brown; quills blackish brown, edged with creamy white, which is not continuous on the primaries, but is broader near the base and near the ends; the inner secondaries margined with rufous; upper tail-coverts ashy brown; tail-feathers blackish brown, edged with ashy brown; crown of head uniform chestnut; lores and feathers round eye, as well as a narrow eyelid, ashy whitish; ear-coverts and cheeks, as well as the sides of the throat, purer white, the centre of the throat blackish; remainder of under surface pale ashy brown, whiter on the abdomen; thighs ashy brown; under tail-coverts whitish, with ashy-brown centres; under wing-coverts and axillaries dull white, the latter tinged with rufous; quills below dusky, ashy along the inner edge: "bill black in summer, brown in winter; feet reddish grey; iris chestnut-brown" (*A. David*). Total length 5 inches, culmen 0·5, wing 2·75, tail 1·7, tarsus 0·65.

Adult female. Very similar to the male, and resembling the hen of *P. cinnamomeus*, but without the yellow tinge on the under surface, which is browner; the head and neck are also browner, and the superciliary streak is deep isabelline. Total length 5 inches, culmen 0·4, wing 2·8, tail 1·75, tarsus 0·65.

Hab. Japan, North China, and Formosa.

a, b. ♂ ♀ ad. sk.	Japan.	Gould Coll.
c. ♂ ad. sk.	Ningpo, May 1872.	Consul Swinhoe [C.].
d. ♂ ad. sk.	Ningpo, March 13, 1884.	F. W. Styan, Esq. [P.].
e. ♂ ad. sk.	Formosa.	Consul Swinhoe [C.].

16. Passer assimilis.

Passer assimilis, *Walden, Ann. & Mag. Nat. Hist.* (4) v. p. 218 (1870); *Hume, Str. F.* 1875, p. 157; *Blyth, B. Burm.* p. 94 (1875); *Hume & Davison, Str. F.* 1878, p. 407; *Hume, Str. F.* 1879, p. 107; *Wardlaw Ramsay, Works Tweedd.*, App. pp. 93, 668 (1881); *Oates, B. Brit. Burm.* i. p. 350 (1883).

Adult male. The whole upper plumage from the nostrils to the rump deep chestnut; upper tail-coverts greyish brown, with dark shaft-stripes; the feathers of the back with the inner webs black at the tip; lores, feathers round the eye, and over the ear-coverts brown; cheeks, ear-coverts, and sides of the neck pure white; a broad black streak from the chin, over the throat to the upper breast, where it becomes wider; lower plumage sooty brown; lesser wing-coverts chestnut; median coverts black, broadly tipped with pure white; greater coverts brown, edged with pale rufous and tipped with whitish; primaries and secondaries dark brown, narrowly edged with pale rufescent, the third to the seventh primaries with a broader edge of the same at the base of the outer webs; tertiaries blackish, edged with chestnut; tail brown, edged paler. (*Oates.*)

Female. Head and nape brown, tinged with rufescent, the feathers of the forehead with darker centres; back rufescent brown, the terminal portion of the inner webs black, and the outer webs paler than the inner ones; rump pale chestnut; upper tail-coverts greyish brown; tail brown; a distinct supercilium pale rufescent; lores and a short streak behind the eye dark brown; cheeks and ear-coverts grey; a large patch below the ear-coverts fulvous-yellow; chin and throat dark brown; lower plumage greyish brown, fulvescent or yellowish on the abdomen; under tail-coverts brown, edged with yellowish; lesser wing-coverts rufescent; median coverts dark brown, broadly tipped with pure white; greater coverts dark brown, narrowly edged with whitish; quills dark brown, narrowly edged with pale rufescent, the third to the seventh primaries with a broader edge of the same near the base of the outer webs; tertiaries and inner coverts dark brown, edged more broadly with rufous. (*Oates.*)

Length 4·5 inches, tail 1·7, wing 2·7, tarsus 0·5, bill from gape 0·55.

The female is of about the same size.

Hab. Tonghoo and Karen-nee, Burmah.

17. Passer flaveolus.

Passer flaveolus, *Blyth, J. A. S. Beng.* xiii. p. 946 (1844); *id. Cat. B. Mus. As. Soc.* p. 120 (1849); *Bp. Consp.* i. p. 508 (1850); *Gray, Hand-l. B.* ii. p. 86, no. 7267 (1870); *Blanf. t. c.* p. 469; *Hume, Nests & Eggs Ind. B.* p. 460 (1873); *id. Str. F.* 1874, p. 481; *id. & Oates, Str. F.* 1875, p. 156; *Blyth & Walden, B. Burm.* p. 94 (1875); *Anderson, Zool. Exped. Yun-nan*, p. 682 (1878); *Hume & Davison, Str. F.* 1878, p. 406; *Tiraud, Bull. Com. Agric. Cochinchine*, i. p. 133 (1879); *Hume, Str. F.* 1879, p. 107; *Oates, Str. F.* 1882, p. 233; *id. B. Brit. Burm.* i. p. 349 (1883).

Passer jugiferus, *Bp. Consp.* i. p. 508 (1850, *ex Temm. MSS.*); *Blyth, Ibis*, 1870, p. 172; *Gray, Hand-l. B.* ii. p. 86, no. 7271 (1870).

Adult male. General colour above uniform cinnamon-rufous; the lower back and rump olive-greenish; scapulars and lesser wing-coverts cinnamon like the back; median coverts pale sulphur-yellow, forming a wing-band; greater series blackish, externally

ashy olive, paler towards the end of the feathers; bastard-wing and primary-coverts black, the latter fringed with brown; quills blackish, edged with brown, the secondaries with ashy olive, paler towards the ends; the primaries with a small speculum of light brown, formed by the basal portion of the outer web; upper tail-coverts dull olive, dusky in the centre; tail-feathers dark brown, edged with ashy olive, the edge of the inner web paler brown; crown of head and hind neck olive-green, flanked by a broad streak of cinnamon-rufous, which starts from above the eye and widens out on the sides of the nape; base of forehead olive-yellow, brighter above the eye; lores and feathers below the eye blackish; eyelid yellow; cheeks and ear-coverts sulphur-yellow; throat black; remainder of under surface of body sulphur-yellow, more olivaceous on the sides of the body and flanks; under tail-coverts sulphur-yellow; axillaries and under wing-coverts yellowish, the lower coverts whitish washed with yellow; quills dusky below, ashy along the inner webs: "bill black; legs and claws plumbeous flesh-colour; iris dark hazel-brown" (*Oates*). Total length 4·8 inches, culmen 0·45, wing 2·8, tail 2·15, tarsus 0·65.

Adult female. Different from the male. Brown above, the head as well as the lower back and rump washed with yellowish olive; lesser wing-coverts like the back; median and greater coverts dusky blackish, externally pale brown, whity brown at the ends of the feathers, more distinct on the median series; bastard-wing and primary-coverts dark brown, the latter fringed with olive-brown; quills brown, edged with ashy brown, the base of the primaries externally whity brown, forming a small speculum, the primaries having also a whitish edging at about a third of the distance from the tip; tail-feathers light brown, edged with ashy brown; a narrow eyebrow of pale yellow; eyelid and feathers below the eye yellowish; ear-coverts brown, slightly washed with olive-yellow; under surface of body pale ashy brown, washed with yellow, the throat clearer yellow: "bill flesh-colour" (*Oates*). Total length 5·1 inches, culmen 0·45, wing 2·55, tail 1·9, tarsus 1·6.

Young. Resembles the old female, but is rather clearer brown above and brighter yellow below, the margins to the quills and wing-coverts broader and clearer sandy buff.

Hab. Upper Burmah, Pegu, Arakan, and Cochin China.

a. ♂ ad. sk.	Burmah (*Dr. Williams*).	Hume Coll.
b. ♂ ad.; *c.* Juv. sk.	Upper Burmah.	T. C. Jerdon, Esq. [C.].
d. ♂ ad. sk.	Upper Burmah (*Jerdon*).	Gould Coll.
e. ♂ ad. sk.	Thayetmyo.	W. T. Blanford [P.].
f, g. ♂ ad. sk.	Pegu, May 29.	Oates Coll.
h. ♀ ad. sk.	Pegu, June 29.	Oates Coll.
i. ♂ ad. sk.	Pegu, Jan. 2.	Oates Coll.
k. ♂ ad. sk.	Pegu, Feb. 7.	Oates Coll.
♀ ad. ak.	Pegu.	Oates Coll.

18. Passer emini.

Sorella emini bey, *Hartl. J. f. O.* 1880, pp. 211, 325; *Pelz. Sitz. zool.-bot. Gesellsch. Wien*, xxxi. p. 150 (1881).

Sorella emini, *Hartl. Abhandl. nat. Ver. Bremen*, vii. p. 123 (1881); *id. J. f. O.* 1881, pl. i. figs. 3, 4; *Abhandl. Bremen*, viii. p. 201 (1882); *Pelz. Sitz. zool.-bot. Gesellsch.* xxxii. p. 507 (1882); *Fischer, Zeitschr. ges. Orn.* i. p. 322 (1884); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 174 (1884).

Adult male. General colour above deep chestnut, darker and more vinaceous on the head; lesser and median coverts chestnut, like the back; greater coverts blackish, margined with sandy buff, the inner ones edged and broadly tipped with chestnut; bastard-wing dusky blackish; primary-coverts and quills dusky brown, edged with paler brown, whiter near the base of the primaries, and forming a small speculum; the edges of the secondaries tinged with rufous; upper tail-coverts chestnut, like the back; tail-feathers dark brown, edged with sandy buff; head all round as well as the entire under surface of the body deep vinous chestnut, with a few whitish-edged feathers on the abdomen; thighs chestnut; under tail-coverts whitish, with brown centres; under wing-coverts and axillaries chestnut; quills below dusky, ashy whitish along the inner web: "bill black; feet reddish; iris dusky" (*Emin*). Total length 4·5 inches, culmen 0·4, wing 2·35, tail 1·5, tarsus 0·6.

Adult female. Different from the male, and Sparrow-like. General colour above brown, the feathers of the back mottled with black centres to the feathers; scapulars, lower back, rump, and upper tail-coverts uniform chestnut; wing-coverts brown, with a reddish tinge, the median series tipped with white; greater coverts, bastard-wing, primary-coverts, and quills dark brown, edged with pale brown, the outer primaries margined with whitish near the base of the outer web, forming a small speculum; tail-feathers brown, edged with lighter brown; crown of head ashy grey, slightly tinged with rufous; occiput, nape, and hind neck ashy brown; lores and a broad superciliary streak vinous chestnut; ear-coverts pale ashy brown; cheeks, throat, and fore neck pale vinous chestnut; sides of neck ashy, washed with chestnut; remainder of under surface of body ashy, washed with chestnut on the breast; the abdomen and under tail-coverts whiter, the latter with browner centres; sides of body and flanks reddish brown; thighs isabelline; under wing-coverts and axillaries isabelline, the latter tinged with rufous; quills below dusky, ashy along the inner edge: "soft parts as in the male" (*Emin*). Total length 4·5 inches, culmen 0·4, wing 2·35, tail 1·5, tarsus 0·55. (*Mus. G. E. Shelley.*)

Males in winter plumage have the back streaked with black centres to the feathers, and have the rest of the chestnut plumage obscured by ashy-whitish margins to the feathers. (*Mus. G. E. Shelley.*)

Hab. Equatorial Africa from Shoa to the neighbourhood of Lado and south to Masai-Land.

a. ♂ ad. sk. Lado, March 9, 1880 (*Emin Bey*). Forbes Coll.

19. Passer arcuatus.

Le Moineau du Cap de Bonne Espérance, *Briss. Orn.* iii. p. 104, pl. 5. fig. 3 (1760); *Daubent. Pl. Enl.* iv. pl. 230. fig. 1.
Le Croissant, *Buff. Hist. Nat. Ois.* iii. p. 501 (1775).
Loxia melanura, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 153 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 253.
Crescent Finch, *Lath. Gen. Syn.* ii. pt. i. p. 266 (1783).
Fringilla arcuata, *Gm. Syst. Nat.* i. p. 912 (1788); *Grill, Zool. Anteckn.* p. 24 (1858).
Pyrgita arcuata, *Cuv. Règne Anim.* i. p. 385, note (1817); *Brehm, Vög. Deutschl.* p. 266, note (1831); *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Passer arcuatus, *Gray, Gen. B.* ii. p. 373 (1849); *Blyth, Cat. B. Mus. As. Soc.* p. 119 (1849); *Bp. Consp.* i. p. 510 (1850); *Bocage, Jorn. Lisb.* i. p. 752 (1867); *Layard, B. S. Afr.* p. 204 (1867); *Ayres, Ibis*, 1869, p. 295; *Sharpe, Cat. Afr. B.* p. 69 (1871); *Gurney in Anderss. B. Dam.-Ld.* p. 185 (1872); *Shelley, Ibis*, 1875, p. 80; *Bocage, Orn. Angola*, p. 363 (1881); *Shelley, P. Z. S.* 1882, p. 357; *Holub & Von Pelz. Beitr. Orn. Sudafr.* p. 131 (1882); *Salvin, Cat. Strickl. Coll.* p. 209 (1882); *Butler, Feilden, & Reid, Zool.* 1882, p. 301; *Sharpe, ed. Layard's B. S. Afr.* pp. 478, 850 (1884).
Passer melanurus, *Gray, Hand-l. B.* ii. p. 86, no. 7263 (1870).

Adult male in breeding-plumage. General colour above rich cinnamon, the hind neck and mantle being overshaded with ashy; the scapulars, lower back, and rump clear bright cinnamon or chestnut; wing-coverts also cinnamon; median series black tipped with white, forming a wing-bar; greater coverts blackish, externally ashy brown and tipped with dull white, forming a second wing-bar; bastard-wing, primary-coverts, and quills blackish, fringed with paler brown, the quills margined with light brown, fulvescent on the secondaries and at about one third of the primaries from the tip, the latter having also a pale brown mark near the base of the outer web; upper tail-coverts ashy brown; tail-feathers blackish, margined with pale rufous-brown; crown of head, lores, feathers round the eye, ear-coverts, cheeks, throat, and fore neck black; a streak from above the eye creamy white, like the sides of the neck and hinder cheeks, forming a large patch; breast, abdomen, and under tail-coverts creamy white, the sides of the body and thighs ashy; axillaries and under wing-coverts white, the latter with dusky bases; quills dusky below, ashy fulvous along the edge of the inner web: "bill black; tarsi and feet dusky brown; iris dusky umber" (*T. Ayres*). Total length 5·8 inches, culmen 0·55, wing 3·2, tail 2·4, tarsus 0·75.

The *winter plumage* of the adult male does not differ materially from the summer plumage, and the black on the head and throat is only slightly obscured with brown; there is more grey on the back and mantle than in summer, and the white eyebrow and patch behind the ear-coverts are somewhat tinged with buff.

Adult female. Duller in colour than the male, and having the cinnamon colour of the back less bright; the mantle and upper back brown; the crown dusky blackish; lores, sides of face, fore part of

cheeks, and ear-coverts dusky brown, as also the throat and fore neck; breast and abdomen, thighs and under tail-coverts creamy buff; a streak of creamy buff along the sides of the hinder crown, and a patch of creamy buff behind the cheeks, these light markings not united as in the male, but separated from each other by the ashy-brown sides of the neck. Total length 5·5 inches, culmen 0·5, wing 2·9, tail 2·1, tarsus 0·8.

The specimens from Damara-Land are rather smaller than those from the Cape, but do not differ in colour.

The young birds greatly resemble the old female, but have the throat whiter: the back is cinnamon-brown, a little clearer on the lower back and rump; the cheeks are ashy whitish, and there is no sign of the pale mark behind the cheeks: the eyebrow also is very indistinct: the head and neck are dull ashy, the former slightly mottled with dusky tips to the feathers.

Hab. South Africa, eastwards to the Transvaal, and westwards to Benguela.

a, *b*. ♂ ♀ ad. st.	South Africa.	Sir A. Smith [C.].
c. ♀ ad. st.	South Africa.	Purchased.
d. ♂ ad.; *e*. Pull. sk.	South Africa.	Sir A. Smith [C.].
f. ♂ ad. sk.	South Africa.	Gould Coll.
g, *h*. ♂ ♀ ad. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
i. ♀ ad. sk.	Cape Town, June 29 (*C. J. Andersson*).	Sharpe Coll.
k. ♂ juv. sk.	Transvaal (*T. Ayres*).	Sharpe Coll.
l. ♂ ad. sk.	Potchefstroom, Transvaal, Nov. 6 (*T. Ayres*).	Forbes Coll.
m. ♂ ad. sk.	Damara-Land, July 5 (*C. J. Andersson*).	Sharpe Coll.
n. ♀ ad.; *o*. ♂ juv. sk.	Otjimbinque, Damara-Land, Jan. 8 (*C. J. Andersson*).	Sharpe Coll.
p. ♀ ad. sk.	Otjimbinque, Aug. 23 (*C. J. Andersson*).	Sharpe Coll.

20. Passer swainsoni.

Emberiza capensis, var., *Salt, Trav. Abyss.*, App. p. xlviii (1814).
Pyrgita swainsoni, *Rüpp. Neue Wirb.* p. 94, Taf. 33. fig. 2 (1835–40).
Passer swainsoni, *Rüpp. Syst. Uebers.* p. 78 (1845); *Heugl. J. f. O.* 1862, p. 30; *Antin. Cat. descr. Ucc.* p. 74 (1864); *Scl. P. Z. S.* 1864, p. 110; *Gray, Hand-l. B.* ii. p. 87, no. 7281 (1870); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 634, App. p. cxli (1870–71); *Blanf. Geol. & Zool. Abyss.* p. 411 (1870); *Finsch, Tr. Z. S.* vii. p. 269 (1870); *id. & Hartl. Vög. Ostafr.* p. 450 (1870, pt.); *Sharpe, P. Z. S.* 1870, p. 143; *id. Cat. Afr. B.* p. 69 (1871); *Hartl. Abhandl. nat. Ver. Bremen*, vii. p. 105 (1881); *Shelley, Ibis*, 1881, p. 589; *Salvin, Cat. Strickl. Coll.* p. 211 (1882); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 176 (1884).
Passer simplex (*nec Sw.*), *Gray, Gen. B.* ii. p. 373 (1849); *Brehm, Reis. Habesch*, p. 342 (1863).
Pyrgitopsis swainsoni, *Bp. Consp.* i. p. 510 (1850); *Reichenb. Singv.* p. 88, pl. xlv. fig. 326 (1861); *Antin. & Salvad. Viagg. Bogos*, p. 114 (1873).

Pyrgita spadicea, *Licht. Mus. Berol.*; *id. Nomencl. Av. Berol.* p. 47 (1854).
Pyrgitopsis simplex, *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 498 (1856).
Fringilla (Passer) swainsoni, *Heugl. Syst. Uebers.* p. 42 (1856).
Passer spadicea, *Heugl. J. f. O.* 1862, p. 30.
Pyrgita crassirostris, *Heugl. J. f. O.* 1867, p. 209 (*ex Pr. Würt. MSS.*).

Adult male. General colour above uniform brown with a rufous tinge, the lower back and rump uniform bright chestnut; lesser and median coverts chestnut, the inner median ones white at the ends; greater coverts brown, edged externally with reddish brown; bastard-wing, primary-coverts, and quills dark brown, margined with reddish brown; upper tail-coverts and tail-feathers brown, with lighter brown margins; crown of head, entire sides of face, hind neck, and sides of neck, as well as the entire under surface of the body, dark ashy grey, a little paler on the throat, which, however, is not whitish; the abdomen a little whiter than the breast; under tail-coverts dusky brown, with whitish margins; under wing-coverts and axillaries brown, tinged with rufous, the latter edged with dull white; quills below dusky ashy, tinged with rufous along the inner edge: "bill black; feet reddish; iris chocolate-brown" (*Heuglin*). Total length 6·5 inches, culmen 0·55, wing 3·15, tail 2·55, tarsus 0·75.

Adult female. Exactly similar to the male. Total length 6 inches, culmen 0·55, wing 3·15, tail 2·4, tarsus 0·8.

The grey colour of the throat, which thus resembles the rest of the under surface, is very well-marked in this species, and distinguishes it from the species of South and West Africa. Capt. Shelley has an example from Melinda in the Zanzibar district, which agrees with Abyssinian specimens in colour, but is larger and has an enormous bill, as has also the Kitui specimen in the Museum.

Hab. From Bogos Land and Abyssinia to the Zanzibar district in East Africa.

a. ♂ ad. sk.	Halai, Tigré, Feb. 29.	W. T. Blanford, Esq. [C.].
b. ♀ ad. sk.	Senafé, Feb. 26.	W. T. Blanford, Esq. [C.].
c. ♀ ad. sk.	Ailat, west of Massowah, June 25, 1868.	W. T. Blanford, Esq. [C.].
d. ♀ ad. sk.	Senafé, April 25 (*W. Jesse*).	Sharpe Coll.
e. Ad. sk.	Anseba Valley, Bogos Land, Aug. 3.	W. T. Blanford, Esq. [C.].
f. ♀ ad. sk.	Kokai, Bogos Land, July 12 (*W. Jesse*).	Sharpe Coll.
g. ♂ ad. sk.	Eylet, June 29 (*W. Jesse*).	Salvin-Godman Coll.
h, i. Ad. sk.	Shoa (*Sir W. C. Harris*).	India Mus.
k. Ad. st.	Shoa.	Dr. Rüppell [C.].
l. ♀ ad. sk.	Kitui in Ukamba, April 1877.	Dr. J. M. Hildebrandt [C.].

21. Passer diffusus.

Pyrgita diffusa, *Smith, Rep. S. Afr. Exped.*, App. p. 50 (1836).
Pyrgita gularis, *Less. Rev. Zool.* 1839, p. 45.
Fringilla grisea (*nec V.*), *Lafr. Rev. Zool.* 1839, p. 95.
Pyrgita simplex (*nec Licht.*), *Swains. B. W. Afr.* i. p. 208 (1837); *Gordon, Contr. Orn.* 1849, p. 10.
Pyrgita spadicea, *Licht. Verz. Vög. Kaffernl.* p. 15 (1842).
Passer diffusus, *Gray, Gen. B.* ii. p. 373 (1849); *Hartl. Orn. W.-Afr.* p. 151 (1857); *Layard, B. S. Afr.* p. 204 (1867); *Hartl. P. Z. S.* 1867, p. 826; *Gray, Hand-l. B.* ii. p. 87, no. 7283 (1870); *Sharpe, P. Z. S.* 1870, p. 143; *id. Cat. Afr. B.* p. 69 (1871); *Ayres, Ibis*, 1871, p. 258; *Gurney, in Anderss. B. Dam.-Land*, p. 187 (1872); *Shelley, Ibis*, 1875, p. 80; *Sharpe & Bouvier, Bull. Soc. Zool. France*, i. p. 49 (1876); *Shelley, P. Z. S.* 1881, p. 589; *Sharpe, in Oates' Matabele Land*, App. p. 321 (1881); *Salvin, Cat. Strickl. Coll.* p. 210 (1882); *Butler, Feilden, & Reid, Zool.* 1882, p. 300; *Sharpe, ed. Layard's B. S. Afr.* pp. 480, 850 (1883); *Schalow, J. f. O.* 1883, p. 364; *Fischer, Zeitschr. ges. Orn.* i. p. 320 (1884); *Rochebr. Faun. Sénég., Ois.* p. 257 (1885).
Pyrgitopsis diffusa, *Bp. Consp.* i. p. 511 (1850).
Passer simplex, *Cab. Mus. Hein.* Th. i. p. 156 (1850); *Hartl. Orn. Westafr.* p. 150 (1857); *Layard, B. S. Afr.* p. 205 (1867); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 636 (1870); *Gray, Hand-l. B.* ii. p. 87, no. 7282 (1870); *Sharpe, P. Z. S.* 1870, p. 143; *id. Ibis*, 1870, p. 483; *id. Cat. Afr. B.* p. 68 (1871); *Nicholson, P. Z. S.* 1878, p. 358; *Forbes, Ibis*, 1883, p. 508; *Rochebr. Faun. Sénég., Ois.* p. 256 (1885).
Passer swainsoni (*nec Rüpp.*), *Reichen. J. f. O.* 1877, p. 29; *Bocage, Orn. Angola*, p. 539 (1881).
Passer occidentalis, *Shelley, Ibis*, 1883, p. 548.

Adult male. Similar to *P. swainsoni*, but smaller, paler in colour, and distinguished especially by its white throat and whiter abdomen. Total length 6 inches, culmen 0·4, wing 3·35, tail 2·4, tarsus 0·75.

Adult female. Similar to the male: "bill brown; base of lower mandible pale brownish orange; iris hazel; legs brown" (*F. Bradshaw*). Total length 5·8 inches, culmen 0·5, wing 3·1, tail 2·3, tarsus 0·75.

A male from the Transvaal, apparently an immature bird, has the back mottled with black centres to the feathers, as in an ordinary Sparrow, and the whole tone of the plumage is browner. This is the only specimen of the *P. diffusus* group in the Museum which has a mottled back, and, instead of being a young bird, it may belong to a distinct species.

At one time I was disposed to keep the West-African Sparrow distinct from the South-African *P. diffusus*; but I have now come to the conclusion that there is a perfect intergradation between the two forms. Captain Shelley is undoubtedly right in showing that, at all events, the West-African bird could not bear the name of *P. simplex*, a title preoccupied for the Algerian Desert Sparrow; but Lesson's name of *gularis* would then be available for any one who wishes to separate the West-African bird.

Hab. The whole of South Africa to the Zanzibar district on the east coast and to Angola on the west coast. In West Africa it occurs from Senegambia to the Niger district. Dr. Rochebrune states that *P. swainsoni*, *P. diffusus*, and *P. occidentalis* all occur in Senegambia; but further proof is necessary before this statement can be accepted.

α. Passer diffusus.

a, b. Ad. sk.	South Africa.	Sir A. Smith [C.]. (Types of species.)
c. ♀ ad. sk.	Upington, Orange River, April 11.	Dr. F. Bradshaw [P.].
d. ♂ imm. sk.	Transvaal (*T. Ayres*).	Sharpe Coll.
e. Ad. sk.	Crocodile River, July (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
f, g. Ad. sk.	Tete, Zambesi (*Sir J. Kirk*).	Livingstone Exped.
h. Ad. sk.	Mozambique.	Dr. Gueinzius [C.].
i. ♂ ad.; *k.* ♂ juv. sk.	Otjimbinque, Damara-Land, June (*C. J. Andersson*).	Sharpe Coll.
l. ♂ ad. sk.	Otjimbinque, Nov. 3 (*C. J. A.*).	Sharpe Coll.
m. ♂ ad. sk.	Elephant Vley, Aug. 15 (*C. J. A.*).	Sharpe Coll.
n. ♀ ad. sk.	Swakop River, Damara-Land, Feb. 1 (*C. J. A.*).	Sharpe Coll.
o. Ad. sk.	Kattenbella, Benguela, Oct. 31 (*Sala*).	Sharpe Coll.
p. Ad. sk.	Angola (*Sala*).	Sharpe Coll.
q. Ad. sk.	Zanzibar Island.	Dr. J. M. Hildebrandt [C.].

β. P. gularis.

r. Ad. sk.	River Niger.	Forbes Coll. (Type of *P. occidentalis*.)
s. Ad. sk.	River Niger.	Mrs. Heywood [P.].
t. Ad. sk.	Abeokuta.	F. Nicholson, Esq. [P.].
u. Ad. sk.	Fantee (*H. T. Ussher*).	Sharpe Coll.
v, w. Ad. sk.	Ashantee.	J. Gould, Esq.
x. Ad. sk.	Senegambia.	Purchased.
y. Ad. sk.	River Gambia.	Gould Coll.
z. Ad. sk.	River Gambia.	Sharpe Coll.
a'. Juv. sk.	River Gambia, Dec. 21, 1864.	Sharpe Coll.

22. Passer ammodendri.

Passer ammodendri, *Severtz.**; *Dode, P. Z. S.* 1871, p. 481; *Gould, B. Asia*, v. pl. 15 (1872); *Severtz. Turkest. Jevotn.* pp. 64, 115;

* The late Dr. Severtzoff, although he apparently did not publish his description of *P. ammodendri* until 1873, distributed specimens to museums and dealers before that date. It was in answer to my solicitations that Mr. Dode, recently escaped from the Paris Commune with a few rare specimens of birds, exhibited some of them at a meeting of the Zoological Society in May 1871, and Mr. Gould appears to have been actually the first to give any sort of description of this fine Sparrow. As, however, the specimens belonged to Dr. Severtzoff were collected by him and bore the name he had given, nothing could be more unfair than to deprive him of the credit of naming the species.

Dresser, Ibis, 1875, p. 239; *Hume, Str. F.* 1875, p. 220; *Prjevalski, in Rowley's Orn. Misc.* ii. p. 295 (1877); *David & Oust. Ois. Chine*, p. 549 (1878).

Passer stoliczkæ, *Hume, Str. F.* 1874, p. 516.

Adult male. General colour above pale ashy brown; the feathers of the mantle and upper back greyish white externally, and broadly streaked with black; lower back and rump ashy brown, mottled with blackish centres to the feathers; lesser wing-coverts black; median coverts white, with black bases, forming a wing-bar; greater coverts blackish, externally pale ashy brown, and whitish at tip; bastard-wing blackish, fringed with ashy fulvous; primary-coverts blackish, externally edged with ashy brown; quills light brown, edged with ashy brown, whiter toward the end, and tinged with sandy near the base; the primaries with a speculum of whitish near the base of the outer web of primaries, which have also a broader whitish edging at about one half of the feather; upper tail-coverts pale ashy brown, with dusky centres; tail-feathers ashy brown, whiter on the outer ones; crown of head black, narrowing on the nape and widening again on the hind neck; eyebrows, lores, feathers round eye, and a streak along the upper edge of ear-coverts black, the latter as well as the cheeks greyish white; above the lores a streak of white, continued into a broad band of pale cinnamon, starting above the eye and widening out towards the sides of neck: the latter whitish; throat black, as well as a spot at the base of the cheeks; fore neck and rest of under surface of body ashy whitish, purer white on the centre of abdomen and under tail-coverts; sides of body, flanks, and thighs clearer ashy brown; under tail-coverts white, with pale brown centres to the feathers; under wing-coverts and axillaries white; quills below pale ashy brown, whitish along the inner web. Total length 6 inches, culmen 0·5, wing 3·05, tail 2·5, tarsus 0·8.

Winter plumage. More sandy brown than in summer, the shaft-streaks on the mantle and back much narrower; black of crown and nape obscured with ashy margins to the feathers; white of face and underparts slightly washed with ashy brown.

Adult female. General colour above very pale sandy brown, with a slight rufous tinge on the mantle, the feathers of which have blackish centres; lesser wing-coverts light reddish brown, with dusky bases; median coverts creamy white, blackish at the base; greater coverts blackish, externally pale brown, with a creamy-white margin and tip; bastard-wing brown, edged and tipped with white; primary-coverts and quills brown, edged with pale sandy brown, whitish at the tips of all; the primaries broadly margined near the base and towards the ends, more narrowly in the middle; upper tail-coverts pale sandy brown, washed with ashy; tail-feathers light brown, edged with pale sandy brown, faintly tinged with rufous; crown of head uniform sandy brown, washed with ashy; lores ashy; a tolerably broad eyebrow of pale sandy rufous, rather darker posteriorly; eyelid whitish; ear-coverts pale ashy brown: cheeks and under surface of body isabelline, with the centre of the throat

dusky blackish under the isabelline colour; abdomen and under tail-coverts whiter; sides of body and flanks pale sandy brown, with a slight rufous tinge on the latter; thighs isabelline, as also the under wing-coverts and axillaries; quills below pale brown, ashy isabelline along the inner edge. Total length 6·2 inches, culmen 0·45, wing 3·05, tail 2·4, tarsus 0·75.

Hab. Central Asia, from Turkestan and Yarkand to Alachan and Ordos.

a. ♂ ad. sk.	Turkestan, Nov. 27 (*Severtzoff*).	Gould Coll.
b, *c*. ♂; *d*. ♀ ad. sk.	Ferghana, April.	Dr. Severtzoff [C.].
e. ♂ ad. sk.	Kashgar, Dec. 1873 (*J. Biddulph*).	Hume Coll.
f. ♂ ad. sk.	Maralbashi, Jan. 1874 (*J. Biddulph*).	Hume Coll.

23. Passer timidus.

Passer timidus, *Prjevalski*; *Deditius*, *J. f. O.* 1886, p. 529.

Adult male. Similar to *P. ammodendri*, and only differing in the lighter colour of the rufous parts of the crown and nape, which are paler and more cinnamon. Total length 6·2 inches, culmen 0·5, wing 3·05, tail 2·3, tarsus 0·75.

Adult female. Resembles the female of *P. ammodendri*. Total length 6 inches, culmen 0·5, wing 3·05, tail 2·5, tarsus 0·7.

Hab. Desert of Gobi.

I have not yet seen Col. Prejvalski's original description of this Sparrow, but Dr. Deditius mentions it in his translation (*l. c.*). I have examined a pair of specimens which seemed to me to be scarcely separable from *P. ammodendri*.

24. Passer simplex.

Fringilla simplex, *Licht. Verz. Doubl.* p. 24 (1823); *Temm. Pl. Col.* iii. pl. 358 (1825).

Pyrgita simplex, *Less. Traité d'Orn.* i. p. 439 (1831); *Licht. Nomencl. Av. Brol.* p. 47 (1854).

Pyrrhulauda simplex, *Gray, Gen. B.* iii. App. p. 30 c (1849).

Corospiza simplex, *Bp. Consp.* i. p. 511 (1850); *Cab. Mus. Hein* Th. i. p. 156 (1850); *Antin. Cat. descrr. Ucc.* p. 74 (1864); *Loche, Expl. Sci. Algér., Ois.* i. p. 138 (1867).

Fringilla (Passer) simplex, *Heugl. Syst. Uebers.* p. 42 (1856).

Passer simplex, *Hartm. J. f. O.* 1863, p. 313; *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 636 (1870), iv. App. p. cxlii (1871); *Dresser, B. Eur.* iii. p. 603, pl. 179 (1876).

Passer lichtensteini, *Heugl. J. f. O.* 1868, p. 88; *Gray, Hand-l. B.* ii. p. 87, no. 7284 (1870).

Adult male. General colour above creamy isabelline, quite uniform; lesser wing-coverts like the back; median coverts white; greater coverts blackish at base, with broad white ends to the feathers; bastard-wing blackish, edged with white; primary-coverts

dusky blackish, fringed with ashy white; quills brown, darker brown towards the ends and on the inner secondaries; primaries edged with white, the secondaries isabelline whitish towards the ends; upper tail-coverts creamy white; tail-feathers brown, darker towards the ends, broadly edged with white on both webs; crown of head a little greyer than the back: lores and feathers in front of the eye blackish; ear-coverts and cheeks white, with a dusky line along the upper edge of the ear-coverts; throat black, extending to the fore neck; remainder of under surface of body white, with a slight tinge of isabelline on the sides of body and flanks; thighs, under tail-covorts, under wing-coverts, and axillaries white; quills below ashy brown, pale ashy isabelline along the inner edge: "bill white at base, clear brownish at the point and on the sides; feet yellowish; iris black" (*Loche*). Total length 5·3 inches, culmen 0·45, wing 3·05, tail 2·1, tarsus 0·8.

Adult female. Uniform sandy brown, the head like the back, the rump and upper tail-coverts paler; ear-coverts and sides of face sandy brown; cheeks and under surface of body white, tinged with sandy buff on the breast, sides of body, and flanks: "feet flesh-colour" (*Loche*). Total length 5·6 inches, culmen 0·5, wing 3·15, tail 2·15, tarsus 0·8.

Hab. Desert countries to the south of Algeria, ranging to Nubia, Kordofan, and Senaar.

a. ♂ ad. sk.	Algeria.	Purchased.
b, c. ♂ ♀ ad. sk.	Fezzan, Tunis.	Gould Coll.

25. Passer luteus.

Fringilla lutea, *Licht. Verz. Doubl.* p. 24 (1823); *Temm. Pl. Col.* iii. pl. 365 (1825); *Gray, Gen. B.* ii. p. 371 (1849); *id. Hand-l. B.* ii. p. 83, no. 7215 (1870).
Pyrgita lutea, *Brehm, Vög. Deutschl.* p. 277, note (1831); *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Serinus luteus, *Rüpp. Neue Wirb.* p. 101 (1835–40); *id. Syst. Uebers.* p. 77 (1845).
Auripasser lutea, *Ep. Consp.* i. p. 519 (1850); *Antin. Cat. descrr. Ucc.* p. 75 (1864); *Sharpe, Cat. Afr. B.* p. 69 (1871).
Chrysospiza lutea, *Cab. Mus. Hein.* Th. i. p. 157 (1850); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 637 (1870).
Fringilla (Dryospiza) lutea, *Heugl. Syst. Uebers.* p. 41 (1856).
Carduelis lutea, *Heugl. J. f. O.* 1867, p. 299 (*ex Pr. Würt. MSS.*).

Adult male. General colour above chestnut, the lower back chestnut, shading off into sulphur-yellow on the rump; lesser wing-coverts ashy yellow: median and greater coverts and bastard-wing black, with a terminal spot of yellowish white, tinged with chestnut on the greater coverts, the innermost being externally chestnut; primary-coverts dusky blackish: quills blackish, edged with yellowish white, the secondaries more broadly with chestnut; upper tail-coverts ashy brown, tinged with yellow; tail-feathers brown, edged with paler brown: crown of head, occiput, nape, and hind

neck sulphur-yellow, washed with ashy on the latter; sides of face entirely sulphur-yellow, with a slightly brighter streak over the eye; under surface of body sulphur-yellow; thighs dusky brown; under tail-coverts blackish, broadly edged with pale yellow; under wing-coverts white, washed with pale sulphur-yellow, the edge of the wing dark brown edged with yellow; axillaries pale yellow; quills below dusky, ashy along the inner edge. Total length 4·9 inches, culmen 0·4, wing 2·55, tail 2, tarsus 0·65.

Adult female. Different from the male. General colour above brown, the mantle and upper back more or less chestnut, the lower back and rump uniform sandy brown; lesser wing-coverts pale tawny buff; median and greater coverts blackish, edged with tawny buff, whitish at the ends, especially broad on the median series; bastard-wing, primary-coverts, and quills blackish brown, edged with sandy buff, more rufous on the margins of the secondaries; upper tail-coverts brown with a reddish tinge, edged with ashy white; tail-feathers brown, edged with sandy buff or isabelline; crown of head and hind neck ashy brown; lores whitish; above the ear-coverts a narrow eyebrow of pale yellow; sides of face and ear-coverts light ashy washed with yellow; cheeks and throat ashy whitish, washed with pale yellow; fore neck and remainder of under surface of body isabelline with a yellow tinge; sides of body and flanks pale sandy brown; thighs and under tail-coverts isabelline, the latter centred with pale brown; under wing-coverts and axillaries whitish, edged with pale yellow; quills below dusky, isabelline along the inner edge. Total length 5·2 inches, culmen 0·45, wing 2·55, tail 2, tarsus 0·65.

Another specimen, apparently young, resembles the female described above, but is browner and more Sparrow-like, the head being uniform like the back; sides of face and under surface of body ashy isabelline, with scarcely any tinge of yellow, except on the chin.

Hab. N.E. Africa.

a, b. ♂ ad. sk.	N.E. Africa.	Sharpe Coll.
c. ♂ ad. sk.	Abyssinia.	Sharpe Coll.
d. ♀ ad. sk.	Abyssinia.	Christiania Mus. [P.].
e. ♂ ad. st.	Abyssinia.	Purchased.
f. ♀ ad. sk.	Senaar.	Purchased.

26. Passer euchlorus.

Auripasser euchlora, *Licht. MSS. in Mus. Berol.*; *Bp. Consp.* i. p. 519 (1850).
Chrysospiza euchlora, *Cab. Mus. Hein.* Th. i. p. 157, note (1850); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 639 (1870).
Fringilla albeola, *Müll. Naum.* i. pt. iv. p. 29 (1851).
Auripasser muelleri, *Bp. Notes Orn. Coll. Delattre*, p. 17 (1854).
Pyrgita euchlora, *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Fringilla euchlora, *Gray, Hand-l. B.* ii. p. 83, no. 7216 (1870).
Fringilla muelleri, *Gray, t. c.* p. 83, no. 7217 (1870).

Adult male. General colour above bright yellow; lesser and

median coverts also bright yellow; greater coverts white, externally washed with yellow; bastard-wing ashy, with a black central streak, externally yellowish white; primary-coverts and quills blackish, externally edged with ashy white, a little browner and more isabelline on the inner secondaries; upper tail-coverts yellow; tail-feathers blackish, edged with whitish isabelline; crown of head, sides of face, and entire under surface of body bright yellow, the feathers white at the base; cheeks whiter; under wing-coverts and axillaries yellow, or white edged with yellow; quills below blackish, ashy isabelline along the inner edge. Total length 4·5 inches, culmen 0·4, wing 2·45, tail 2, tarsus 0·65.

Adult female. Different from the male. General colour above ashy brown, washed with yellow, the lower back and rump uniformly brown: lesser wing-coverts ashy brown like the mantle; median and greater coverts blackish, edged externally with ashy isabelline; bastard-wing, primary-coverts, and quills blackish, edged with isabelline, whiter on the primaries; upper tail-coverts ashy brown, with blackish shaft-lines; tail-feathers brown, edged with isabelline; crown of head sandy brown, washed with yellow; lores and feathers round eye whitish: ear-coverts pale ashy; cheeks and throat whitish; fore neck and breast pale yellow; abdomen whiter; sides of body and flanks isabelline tinged with yellow; thighs and under tail-coverts isabelline, the latter tinged with yellow; under wing-coverts and axillaries whitish, with a yellowish tinge; quills below dusky, ashy whitish along the inner edge. Total length 4·5 inches, culmen 0·4, wing 2·25, tail 2.

A female presented by Dr. Sclater is more yellow on the back than the bird described, and has the mantle-feathers centred with dusky blackish; sides of face and entire under surface of body sulphur-yellow.

Hab. Arabia.

a, b. ♂ ♀ ad. sk.	Aden.	C. Chevalier, Esq. [P.].
c. ♀ ad. sk.	Aden.	P. L. Sclater, Esq. [P.].

39. POLIOSPIZA.

Type.

Poliospiza, *Bp. Consp.* i. p. 519 (1850, *ex Schiff. MSS.*) ..... P. gularis.

? Tephrospiza, *Reichenb. Syst. Av.* Taf. lxxv. fig. 15 (1850) ..... Typo haud indicato.

Bill of *Poliospiza gularis*, from above.

Range. Confined to Africa.

Key to the Species.

a. Throat white, with or without black spots.
  a'. Larger: wing 2·85–2·95 inches; crown more or less streaked with white; cheeks somewhat mottled with white ..... *gularis*, p 343.
  b'. Smaller: wing 2·6 inches; crown uniform, slightly streaked with black on the forehead; a pure white superciliary streak; cheeks uniform ashy like the ear-coverts and breast. *tristriata*, p. 345.
b. Throat ochreous buff like the rest of the under surface..... *rufibrunnea*, p. 346.

1. Poliospiza gularis*.

Linaria gularis, *Smith, Rep. S. Afr. Exped.*, App. p. 49 (1836).
Fringilla gularis, *Gray, Gen. B.* ii. p. 372 (1849); *Grill, Zool. Anteckn.* p. 24 (1858); *Layard, B. S. Afr.* p. 203 (1867); *Gray, Hand-l. B.* ii. p. 83, no. 7210 (1870).
Poliospiza gularis, *Bp. Consp.* i. p. 519 (1850); *Gurney, Ibis*, 1864, p. 353; *Sharpe, Cat. Afr. B.* p. 68 (1871); *Gurney in Anderss. B. Damara-Land*, p. 183 (1872); *Ayres, Ibis*, 1880, p. 108; *Sharpe, in Oates' Matabele-Land, App. Birds*, p. 322 (1881); *Butler, Feilden, & Reid, Zool.* 1882, p. 301; *Salvin, Cat. Strickl. Coll.* p. 207 (1882); *Shelley, Ibis*, 1882, p. 358; *Sharpe, ed. Layard's B. S. Afr.* pp. 482, 850 (1884).
Fringilla humilis, *Licht. MSS. in Mus. Berol.*; *undè Bp. Consp.* i. p. 577, note (1850); *Cab. Mus. Hein.* Th. i. p. 156, note (1850).
Pyrgita humilis, *Licht. Nomencl. Av. Berol.* p. 47 (1854).
Poliospiza striaticeps, *Hartl. in Layard's B. S. Afr.* p. 204 (1867).
Fringilla striaticeps, *Layard, B. S. Afr.* p. 204 (1867); *id. Ibis*, 1869, p. 370; *Gray, Hand-l. B.* ii. p. 83, no. 7214 (1870).
Passer humilis, *Gray, Hand-l. B.* ii. p. 85, no. 7276 (1870).

Adult male. General colour above ashy brown, the back slightly mottled with dusky centres to the feathers: lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills blackish brown, edged with the same brown as the back, the greater coverts and inner secondaries ashy whitish on their edges; upper tail-coverts brown; tail-feathers blackish brown, edged with ashy brown and fringed with whitish along the inner

* The following species are stated to be allied to *P. gularis*; but a direct comparison is necessary to establish their validity:—

POLIOSPIZA REICHARDI.

Poliospiza reichardi, *Reichen. J. f. O.* 1882, p. 209; *Schalow, J. f. O.* 1883, p. 364.

Adult male. Above brown, the crown varied with white; underneath white, the breast and flanks brownish; quills and tail-feathers dusky, margined with white at the tip; bill, feet, and iris dusky. Total length 4·9 inches, wing 3, tail 1·95, bill from gape 0·45.
Hab. Kakoma, E. Africa.

POLIOSPIZA FLEGELI.

Poliospiza flegeli, *Hartert, J. f. O.* 1886, p. 583.

Closely allied to *P. reichardi*.
Hab. River Niger.

web; crown of head dark brown, streaked with white, with which the feathers are edged towards the base; the hind neck also slightly streaked with white; a narrow white eyebrow; lores and eyelid, as well as the ear-coverts, dusky brown, the latter with a few white streaks; cheeks dusky brown, spotted with blackish along the malar line; throat white, with a few blackish spots on the upper part and on the chin; sides of neck light brown; fore neck and under surface of body pale drab-brown, inclining to isabelline on the lower breast and abdomen; sides of body and flanks pale brown; thighs and under tail-coverts pale isabelline, the latter with dusky centres; under wing-coverts and axillaries light brown; quills below dusky, ashy along the inner edge: "bill horn-colour; legs stone-colour; iris hazel" (*T. L. Ayres, MSS.*). Total length 5·3 inches, culmen 0·55, wing 2·95, tail 2·25, tarsus 0·65.

The *adult female* resembles the male, but has the throat less distinctly spotted. Total length 5·4 inches, culmen 0·55, wing 2·85, tail 2·3, tarsus 0·65.

The *winter plumage of the adults* only differs from the summer plumage in its somewhat lighter and more mealy character, the light edges to the wing-coverts and secondaries being more distinct.

The amount of spotting on the throat varies considerably, and although most of the males have more distinct and numerous spots than the females, yet sometimes males are found with the spots very minute; these may be younger birds.

Young. More reddish below, and distinguished by dusky streaks on the throat, breast, and flanks.

Hab. South Africa, from the Knysna district to Natal, and thence to the Eastern Transvaal.

. *b.* Ad. st.	South Africa.	Purchased.
c, d. Ad. sk.	South Africa.	Sir Andrew Smith [C.].
e. ♂ ad. sk.	South Africa (*C. J. Andersson*).	Sharpe Coll.
. ♂ ad. sk.	Knsyna.	C. J. Andersson, Esq. [C.].
g. Ad. sk.	George, Knysna district (*H. Atmore*).	Sharpe Coll.
h. ♂ juv. sk.	Grahamstown, Feb. 1870 (*T. C. Atmore*).	Sharpe Coll.
i. Ad. sk.	Eland's Post (*T. C. Atmore*).	Sharpe Coll.
k. ♂ ad. sk.	Kingwilliamstown, July 16, 1877.	Capt. Trevelyan [P.].
l. ♂ ad. sk.	Kingwilliamstown, Dec. 11 (*C. Newby*).	Sharpe Coll.
m. Ad. sk.	Natal (*T. Ayres*).	Salvin-Godman Coll.
n. ♂ ad.; *o,p.* ♂ juv. sk.	Pinetown, Natal, Feb. (*T. L. Ayres*).	Sharpe Coll.
q, r. ♀ ad. sk.	Pinetown, March (*T. L. Ayres*).	Sharpe Coll.
s, t. ♂ ad. sk.	Pinetown, June (*T. L. Ayres*).	Sharpe Coll.
u, v, w. ♂ ad. sk.	Pinetown, Oct. (*T. L. Ayres*).	Sharpe Coll.
x. Ad. sk.	Between Pretoria and Bamangwato, July (*F. Oates*).	W. E. and C. G. Oates, Esqrs. [P.].
y. ♂ juv. sk.	Rustenberg, Feb. 15 (*W. Lucas*).	Sharpe Coll.

z. ♀ ad. sk.	Rustenberg, July 19 (*W. Lucas*).	Sharpe Coll.
a'. Juv. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.

2. Poliospiza tristriata.

Serinus tristriatus, *Rüpp. Neue Wirb., Vög.* p. 97, Taf. 35. fig. 2 (1835–40); *id. Syst. Uebers.* p. 77 (1845); *Heugl. J. f. O.* 1861, p. 195.

Fringilla tristriata, *Gray, Gen. B.* ii. p. 371 (1849); *Heugl. J. f. O.* 1868, p. 91; *Finsch & Hartl. Vög. Ostafr.* p. 449 (1870); *Gray, Hand-l. B.* ii. p. 85, no. 7209 (1870).

Poliospiza tristriata, *Bp. Consp.* i. p. 519 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 502 (1856); *Sperling, Ibis*, 1860, p. 247; *Heugl. in Peterm. Mitth.* 1861, p. 24; *id. J. f. O.* 1862, p. 31; *id. Orn. N.O.-Afr.* i. pt. 2, p. 642 (1870); *Sharpe, Cat. Afr. B.* p. 68; *Bocage, Orn. Angola*, p. 366 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 482 (1884); *Salvad. Ann. Mus. Civic. Genov.* [2] i. p. 174 (1884).

Poliospiza canicapilla, *DuBus, Bull. Acad. Sci. Brux.* xxii. pt. 1, p. 151 (1855); *Hartl. Orn. W.-Afr.* p. 151 (1857).

Passer tristriatus, *Blyth, J. A. S. Beng.* xxiv. p. 257 (1855).

Fringilla (Dryospiza) tristriata, *Heugl. Syst. Uebers.* p. 42 (1856).

? Serinus tristriatus, var., *Bianconi, Spec. Zool. Mosamb.* fasc. xviii. p. 326 (1868).

Fringilla (Polyospiza) tristriata, *Blanf. Geol. & Zool. Abyss.* p. 413 (1870).

Fringilla canicapilla, *Gray, Hand-l. B.* ii. p. 83, no. 7213 (1870).

? Fringilla, sp., *Finsch & Hartl. Vög. Ostafr.* p. 869 (1870).

Adult male. General colour above uniform earthy brown; wing-coverts like the back; bastard-wing, primary-coverts, and quills dark brown, edged with the same brown as the back, the primaries margined with ashy whitish; tail-feathers dark brown, edged with lighter brown; crown of head like the back; lores dark brown, surmounted by a narrow white eyebrow; ear-coverts and cheeks dark brown; throat dull white; remainder of under surface of body ashy brown, rather paler towards the abdomen, which is white near the vent; sides of body and flanks like the breast; thighs and under tail-coverts pale ashy brown, the latter tipped with dull whitish; under wing-coverts and axillaries pale ashy brown; quills below dusky, ashy along the inner edge: "bill pale dusky horn-colour; feet reddish; iris dusky" (*Heuglin*). Total length 4·8 inches; culmen 0·4, wing 2·6, tail 2·15, tarsus 0·65.

A pair of birds collected by Mr. Blanford measure as follows:—

	Total length.	Culmen.	Wing.	Tail.	Tarsus.
a. ♂, Senafé, May ..	4·6	0·45	2·6	2·1	0·60
b. ♀, „ March..	4·7	0·40	2·5	2·1	0·65

There is apparently no difference in the colour of the sexes, the male having a somewhat broader and whiter eyebrow, and a clearer white throat.

Hab. N.E. Africa; Senegambia; reoccurring in S.W. Africa.

a. ♂ ad. sk.	Senafé, Tigré, May 25, 1868.	W. T. Blanford, Esq. [C.].
b. ♀ ad. sk.	Senafé, March 10, 1868.	W. T. Blanford, Esq. [C.].
c. ♂ ad. sk.	Senafé, Feb. 22.	W. T. Blanford, Esq. [C.].
d. ♂ ad. sk.	Lit-Marafia, Shoa, Jan. 12 (*A. Antinori*).	Sharpe Coll.
e. ♂ ad. sk.	Ankober, Shoa, May (*Sir W. C. Harris*).	India Museum.

3. Poliospiza rufibrunnea. (Plate VI.)

Ligurnus rufobrunneus, *Gray, Ann. & Mag. Nat. Hist.* (3) x. p. 444 (1882).
Buserinus rufilatus, *Hartl. P. Z. S.* 1866, p. 328.
Crithagra rufobrunnea, *Gray, Hand-l. B.* ii. p. 101, no. 7506 (1870).
Poliospiza rufobrunnea, *Sharpe, Cat. Afr. B.* p. 68 (1871).

Adult. General colour above rufous-brown, the feathers being dusky brown with rufous-brown edges, the rump more distinctly rufous; lesser wing-coverts like the back; median and greater coverts blackish brown, edged and tipped with rufous; bastard-wing, primary-coverts, and quills blackish brown, edged with olive-brown, the secondaries with rufous; upper tail-coverts rufous, with dusky-brown centres; tail-feathers brown, edged narrowly with rufous; crown of head a little lighter rufous than the back, and streaked with broad blackish centres to the feathers; lores and sides of face dark brown, washed with rufous; throat clearer rufous, with dusky-blackish spots on the chin; remainder of under surface of body also clearer rufous, mixed with brown, the feathers having dull brownish centres; thighs and under tail-coverts like the abdomen; under wing-coverts and axillaries clear rufous; quills below dusky, ashy rufous along the inner edge. Total length 5·5 inches, culmen 0·55, wing 2·9, tail 1·85, tarsus 0·8.

Hab. Prince's Island, W. Africa.

a. Ad. sk.	[West Africa.]	Sir E. Sabine [P.]. (Type of species.)
b. Ad. sk.	Prince's Island.	Dr. Dohrn [C.].

40. ALARIO.

	Type.
Alario, *Bp. Consp.* i. p. 519 (1850)	A. alario.
Crithologus, *Cab. Mus. Hein.* Th. i. p. 164 (1850)	A. alario.

Range. Confined to South Africa.

1. Alario alario.

Cape Sparrow, *Albin, Nat. Hist. B.* iii. p. 63, pl. 67 (1740).
Le petit Moineau du Cap de Bonne Espérance, *Briss. Orn.* iii. p. 106, pl. 5. fig. 2 (1760).
Fringilla alario, *Linn. Syst. Nat.* i. p. 319 (1766).
Bouvreuil du Cap de Bonne Espérance, *Daubent. Pl. Enl.* v pl. 204. fig. 2.

Loxia bouvreuil, *P. L. S. Müll. Syst. Nat. Suppl.* p. 154 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 253.
Cape Finch, *Lath. Gen. Syn.* ii. pt. 1, p. 315 (1783).
Crithagra ruficauda, *Swains. An. in Menag.* p. 318 (1837).
Crithagra bistrigata, *Swains. t. c.* p. 318 (1837).
Spermophila daubentoni, *Gray, Gen. B.* ii. p. 386 (1849).
Alario alario, *Bp. Consp.* i. p. 519 (1850); *Sharpe, Cat. Afr. B.* p. 65 (1871); *id. ed. Layard's B. S. Afr.* p. 477 (1884).
Crithologus alario, *Cab. Mus. Hein.* Th. i. p. 164 (1850).
Crithagra personata, *Licht. Nomencl. Av.* p. 47 (1854).
Alario personatus, *Reichenb. Singv.* p. 39, Taf. xiv. figs. 125, 126 (1861).
Amadina alario, *Layard, B. S. Afr.* p. 200 (1867); *id. Ibis,* 1869, p. 370.
Passer alario, *Gray, Hand-l. B.* ii. p. 87, no. 7285 (1870).
Alario aurantia, *Gurney in Anderss. B. Dam.-Ld.* p. 175 (1872).

Adult male. General colour above uniform deep chestnut, the sides of the lower back somewhat mottled with subterminal marks of silky white on the feathers; wing-coverts chestnut like the back; bastard-wing, primary-coverts, and quills black, the secondaries edged with chestnut near their ends, the innermost much more broadly, all narrowly fringed with reddish white at the tip; upper tail-coverts and tail-feathers chestnut, with a small black shaft-mark near the end of the feathers, larger on the outer ones; crown of head, entire sides of face, throat, and centre of breast black; sides of neck white, forming a half-collar; remainder of under surface of body creamy buff or isabelline, whiter on the sides of the breast; thighs and under tail-coverts slightly more rufescent: under wing-coverts and axillaries chestnut, the edge of the wing black; quills below black, rather more ashy on the inner web. Total length 4·5 inches, culmen 0·35, wing 2·5, tail 1·8, tarsus 0·55.

Adult female. Different from the male. General colour above reddish brown, the feathers mesially streaked with dusky-brown shaft-stripes; rump and upper tail-coverts uniform pale chestnut; lesser and median coverts light chestnut; greater coverts dusky brown, pale chestnut at the ends; bastard-wing, primary-coverts, and quills blackish brown, edged with rufous-brown on the inner secondaries; tail-feathers chestnut, with a broad shaft-mark of black at the end of the feathers, increasing in extent towards the centre feathers, which have nearly the whole of the inner web dusky brown; crown of head and sides of face dull ashy grey, the crown streaked with dusky shaft-streaks; lores and a broad line over the eye white, as also a spot below the eye; ear-coverts with a white spot in the centre; throat dull white; fore neck, chest, and sides of body and flanks pale isabelline brown, whiter on the abdomen; thighs and under tail-coverts pale isabelline brown, the latter with rufous centres; under wing-coverts and axillaries pale rufous, with ashy bases; edge of wing blackish; quills below dusky, more ashy along the inner web. Total length 4·5 inches, culmen 0·35, wing 2·6, tail 1·9, tarsus 0·55.

Young. Resembles the old female, but is more tawny buff, with broad blackish centres to the feathers, the head similarly streaked;

under surface of body fulvescent, spotted with dusky blackish on the throat, breast, and sides of body.

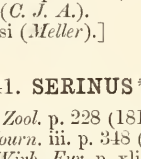
Young males at first resemble the old females and gradually assume the black head by a moult. Some males have the throat white with a crescent of black across the fore neck. This is apparently a winter plumage, but the want of a carefully dated series has prevented my following out the various changes in the present species.

Hab. South Africa, from Cape Town northwards to Damara-Land and eastwards to Port Elizabeth.

a. ♀ ad. sk.	South Africa.	Sir Andrew Smith [P.].
b, c. ♂ ♀ ad. sk.; *d.* ♂ juv. sk.	South Africa.	Sharpe Coll.
e. Juv. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
f. ♀ ad. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
g. ♂ imm. sk.	South Africa (*C. J. Andersson*).	Sharpe Coll.
h. ♀ ad. sk.	Table Mountain, Nov. 30, 1861 (*C. J. A.*).	Sharpe Coll.
i. ♂ imm. sk.	Great Namaqua-Land, June 3, 1862 (*C. J. A.*).	Sharpe Coll.
k. ♀ ad. sk.	[Zambesi (*Meller*).]	Sharpe Coll.

41. SERINUS *.

	Type.
Serinus, *Koch, Syst. baier. Zool.* p. 228 (1816)	S. serinus.
Crithagra, *Swains. Zool. Journ.* iii. p. 348 (1827)....	S. sulphuratus.
Dryospiza, *Keys. & Blas. Wirb. Eur.* p. xli (1840) ..	S. serinus.
Buserinus, *Bp. Consp.* i. p. 522 (1850)	S. sulphuratus.
Metoponia, *Bp. Notes Coll. Delattre*, p. 17 (1854)....	S. pusillus.
Orægithus, *Cab. J. f. O.* 1854, Extrah. p. cxiv.....	S. pusillus.



Bill of *Serinus sulphuratus*, from above.

Range. The whole of Africa, Southern Europe, eastwards to Central Asia and North-western India.

Key to the Species.

a. With no distinct black streaks on the flanks, which are uniform.
  a'. Throat yellow.
    a''. No black on chin.

* I was at first disposed to keep the smaller-billed species distinct as *Serini* from the larger-billed *Crithagræ*, and the Plates were lettered accordingly; but a further study has convinced me that no generic separation can be drawn between the two sections.

a'''. Hind neck and sides of neck ashy grey or greyish brown, contrasting with the crown ..... *canicollis* ♂ ♀, [p. 350.

b'''. Hind neck and sides of neck green, or yellowish green like the head.

*a*⁴. Tail-feathers not tipped with white.

*a*⁵. Thighs ashy; lower abdomen ashy white; a frontal band of yellow; greater wing-coverts black, broadly tipped with yellow, forming broad wing-bands ..... *flavivertex* ♂, p. 351.

*b*⁵. Thighs yellow like the abdomen.

*a*⁶. Throat yellow like the abdomen, the fore neck, breast, and sides of the body green, separating the throat from the breast ..... *sulphuratus* ♂ ♀, [p. 352.

*b*⁶. No green on the breast or flanks, the whole throat and rest of under surface being bright golden yellow.

*a*⁷. A dusky moustachial streak strongly pronounced; general colour above greenish, streaked with black ..... *flaviventris* ♂, [p. 354.

*b*⁷. Moustachial streak obsolete; general colour above yellowish, with scarcely any blackish streaks ..... *imberbis* ♂, p. 355.

*b*⁴. Tail-feathers more or less broadly tipped with white; cheeks bright yellow, separated from the throat by a black malar line ..... *icterus*, p. 356.

b''. Chin black, like the sides of face and forehead. *capistratus* ♂, p. 359.

b'. Throat white.

c''. Rump yellow; a broad ashy-white eyebrow.

c'''. Darker ashy brown, streaked with dusky blackish; rump greenish yellow ..... *albigularis* ♂ ♀, [p. 360.

d'''. Pale ashy brown, streaked with dusky brown; rump bright yellow ..... *crocopygius* ♂ ♀, [p. 361.

d''. Rump brown like the back with scarcely any tinge of green; no perceptible white eyebrow; chin profusely spotted with brown *leucopterus*, p. 361.

b. Flanks streaked with black or dusky blackish.

c'. With no frontal patch of yellow or scarlet.

e''. Back yellowish or green, streaked with dusky, the rump very little lighter than the back, but generally uniform.

e'''. Throat dusky blackish, followed by a yellow spot; a yellow superciliary streak *scotops* ♂ ♀, p. 362.

f'''. Throat yellow, spotted with dusky centres to the feathers; a narrow superciliary streak of yellow ..... *capistratus* ♀, p. 359.

g'''. Throat white ..... *flaviventris* ♀, p. 354, *imberbis* ♀, p. 356.

f''. Back and rump similar in colour, brown mottled with dusky centres to the feathers.

h'''. Head streaked with white; throat white; fore neck, breast, and sides of body streaked with black ..... *striolatus* ♂ ♀ ad., [p. 363.

i'''. Head uniform brown, with a white frontal patch on each side; sides of face, throat, and fore neck dark brown, blacker towards the chin, and sides of body streaked with black ..... *burtoni* ♂, p. 364.

g''. Back brown, more or less mottled with darker centres to the feathers; the rump yellow or white, in strong contrast to the back.

*c*⁴. Rump white ..... *leucopygius* ♂ ♀, [p. 366.

*d*⁴. Rump yellow.

*c*⁵. No yellow tinge on forehead.

*c*⁶. No white tips to the tail-feathers; throat white ..... *xanthopygius*, p. 365.

*d*⁶. Tail-feathers tipped with white; throat dusky blackish, or spotted with black ..... *angolensis*, p. 367.

*d*⁵. Forehead tinged with yellow and streaked with blackish like the back. } *canaria* ♀, p. 371. / *serinus* ♀, p. 369.

d'. With a frontal patch of yellow or crimson.

h''. Frontal patch yellow.

k'''. Sides of body very distinctly streaked with black; inner webs of tail-feathers narrowly edged with ashy white; back ashy or brown streaked with black.

*e*⁴. Larger; back grey streaked with black. *canaria* ♂, p. 370.

*f*⁴. Smaller; back browner, streaked with black ..... *serinus* ♂, p. 368.

l'''. Streaks on sides of body nearly obsolete; inner webs of tail-feathers broadly edged with whitish; back yellow, streaked with brown ..... *canonicus* ♂ ♀, [p. 372

i'''. Frontal patch scarlet; throat black; quills edged with orange ..... *pusillus* ♂ ♀, p. 374.

1. Serinus canicollis.

Crithagra canicollis, *Swains. An. in Menag.* p. 317 (1837); *Gray, Gen. B.* ii. p. 385 (1844); *E. Newt. Ibis*, 1861, p. 272; *Gray, Hand-l. B.* ii. p. 100, no. 7493 (1870); *Sharpe, Cat. Afr. B.* p. 67 (1871); *Ayres, Ibis*, 1876, p. 431; *Hartl. Vög. Madag.* p. 402 (1877); *Salvin, Cat. Strickl. Coll.* p. 216 (1882); *Butler, Feilden, & Reid, Zool.* 1882, p. 301.

Serinus canicollis, *Bp. Consp.* i. p. 522 (1850); *Cab. Mus. Hein.* Th. i. p. 163 (1850); *Sharpe, ed. Layard's B. S. Afr.* pp. 488, 851 (1884).

Fringilla canicollis, *Grill, Zool. Anteckn.* p. 24 (1858); *Layard, B. S. Afr.* p. 201 (1867).

Chloris canicollis, *Schl. P. Z. S.* 1866, p. 424.

Fringilla cinereicollis, *Dubois, Gal. Orn.* pl. 104.

Adult male. General colour above greenish yellow, washed with ashy grey, the mantle and back with slightly indicated dusky centres; the rump and upper tail-coverts clearer yellow and uniform; lesser wing-coverts uniform greenish yellow; the median and greater coverts rather brighter yellow on the edges of the feathers; bastard-wing and primary-coverts black, fringed with yellow; quills black, edged

with yellow, broader on the ends of the secondaries, which are fringed with ashy at the ends; tail-feathers blackish brown, edged externally with yellow; crown of head golden yellow, the top of the head greenish yellow towards the occiput; nape, hind neck, and sides of neck ashy grey, extending over the mantle and forming a broad collar; lores dusky; eyelid and sides of face dull golden yellow, the ear-coverts ashy grey like the sides of the hinder crown and sides of the neck; cheeks, throat, and under surface of body dull golden yellow, clearer and brighter yellow on the lower breast and upper abdomen; the lower abdomen white; sides of body and flanks rather greener; thighs ashy white; under tail-coverts yellow; under wing-coverts and axillaries dull ashy, edged with yellow; quills below dusky, ashy along the inner edge. Total length 5·3 inches, culmen 0·4, wing 3·1, tail 2·15, tarsus 0·55.

Adult female. Duller in colour than the male, and browner on the back, where there are distinct evidences of dusky streaks. The yellow colouring of both upper and under surfaces not so brilliant as in the male, the ashy colour of the hind neck somewhat washed with brown; the crown paler yellow than in the male, and streaked with dusky. Total length 4·7 inches, culmen 0·4, wing 2·9, tail 2, tarsus 0·55.

Hab. South Africa.

a, b, c, d. Ad. sk.	South Africa.	Purchased.
e. Ad. st.	South Africa.	Purchased.
f. Ad. st.	South Africa.	Sir A. Smith [C.].
g. Ad. sk.	Cape Colony (*E. L. Layard*).	Sharpe Coll.
h. Ad. sk.	Near Cape Town.	Sir A. Smith [C.].
i. Ad. sk.	S.E. Africa.	John Rocke, Esq. [P.].
k. Ad. sk.	Natal.	T. Ayres, Esq. [C.].
l, m. ♂ ♀ ad. sk.	Pinetown, Natal, July 21 (*T. L. Ayres*).	Sharpe Coll.
n. ♀ ad. sk.	Macamac, June 16, 1874 (*T. L. Ayres*).	J. H. Gurney, Esq. [P.].
o. ♀ ad. sk.	Elephant River, Damara-Land, Aug. 16, 1862 (*C. J. Andersson*).	Sharpe Coll.
p. ♂ ad. sk.	Réunion, Feb. 15, 1865 (*Van Dam*).	Sharpe Coll.

2. Serinus flavivertex.

Crithagra flavivertex, *Blanf. Geol. & Zool. Abyss.* p. 414, pl. vii. (1870); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 651 (1870); *Gray, Hand-l. B.* ii. p. 100, no. 7487 (1870); *Fischer, Zeitschr. ges. Orn.* i. p. 322 (1884).

Adult male. General colour above yellowish green, slightly streaked with dusky blackish on the mantle and back; the lower rump and upper tail-coverts bright yellow; lesser wing-coverts yellowish green; median coverts brighter yellow, with black bases; greater coverts blackish, edged with yellowish green and broadly tipped with bright yellow, forming a band; bastard-wing, primary-

coverts, and quills blackish brown, edged with yellowish green, more broadly on the secondaries, especially on the innermost, which have a shade of ashy brown at the ends; tail-feathers blackish, edged with bright yellow, and fringed with ashy brown along the inner web; crown of head golden yellow, the sinciput streaked with dusky; the occiput and nape yellowish green like the back, streaked with dusky; lores and feathers round eye dusky; ear-coverts and cheeks yellow, slightly washed with green; throat and under surface of body dull golden yellow, ashy whitish on the abdomen; sides of body and flanks golden yellow like the breast; thighs ashy; under tail-coverts yellow; under wing-coverts and axillaries yellow; quills below dusky, ashy whitish along the inner edge: "upper mandible and lower mandible for its terminal third brown; rest of under mandible bluish white; feet brownish black; iris brown" (*G. A. Fischer*). Total length 5 inches, culmen 0·4, wing 3·1, tail 2·1, tarsus 0·6.

Adult female. Similar to the male, but a little duller in colour, the yellow on the wing not so bright. Total length 5·1 inches, culmen 0·4, wing 3, tail 2·05, tarsus 0·55.

Hab. N.E. Africa, from Abyssinia to Masai-land in East Africa.

a, b. ♂ ♀ ad. sk.	Adigrat, Tigré, April 21, 1868.	W. T. Blanford, Esq. [C.]. (Types of species.)
c. ♂ ad. sk.	Abyssinia.	Dr. Rüppell [C.].

3. Serinus sulphuratus.

Le Grosbec du Cap de Bonne Espérance, *Briss. Orn.* iii. p. 225, pl. xi. fig. 1 (1760).

Loxia sulphurata, *Linn. Syst. Nat.* i. p. 305 (1766).

Brimstone Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 137 (1783).

Coccothraustes sulphurata, *Bonn. et Vieill. Enc. Méth.* iii. p. 1000 (1823).

Crithagra sulphurata, *Swains. Zool. Journ.* iii. p. 348 (1827); *id. Classif. B.* ii. p. 294 (1837); *Jard. & Selby, Ill. Orn.* iii. pl. 109. fig. 1 (c. 1839); *Gray, Gen. B.* ii. p. 385 (1844); *Grill, Zool. Anteckn.* p. 23 (1858); *Layard, B. S. Afr.* p. 218 (1867); *id. Ibis*, 1869, p. 460; *Gray, Hand-l. B.* ii. p. 100, no. 7486 (1870); *Sharpe, Cat. Afr. B.* p. 67 (1871); *Shelley, Ibis*, 1875, p. 80; *Ayres, Ibis*, 1876, p. 431; *Salvin, Cat. Strickl. Coll.* p. 217 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 486 (1884); *Fischer, Zeitsch. ges. Orn.* i. p. 321 (1884).

Buserinus sulphuratus, *Bp. Consp.* i. p. 522 (1850); *Gurney, Ibis*, 1865, p. 269.

Adult male. General colour above yellowish green, streaked on the mantle and back with dusky black; rump uniform and rather clearer yellow; lesser wing-coverts uniform yellowish green; median and greater coverts blackish, edged and tipped with yellow, rather brighter on the latter; bastard-wing, primary-coverts, and quills blackish, edged with yellow, rather brighter towards the end of the inner secondaries; upper tail-coverts dull yellow, streaked along the shaft with dusky; tail-feathers blackish, edged with yellow;

crown of head like the breast, but more narrowly streaked with blackish; the nape and hind neck more uniform greenish; lores dusky, surmounted by a broad eyebrow of golden yellow; feathers round eye and ear-coverts dull greenish, followed by a broad band of golden yellow; cheeks dull greenish, with a yellow spot at the base of the lower mandible; throat golden yellow; sides of neck, fore neck, and breast light yellowish green, the lower breast and abdomen golden yellow; sides of body and flanks light yellowish green, like the chest; thighs and under tail-coverts yellow; under wing-coverts and axillaries yellow; quills below dusky, ashy along the inner edge: "upper mandible dusky yellow, the under palish yellow; tarsus and feet dusky; iris dusky hazel" (*T. Ayres*). Total length 6 inches, culmen 0·55, wing 3·25, tail 2·5, tarsus 0·75.

Adult female. Only differs from the male in being slightly less brilliant, with the yellow stripe along the sides of the face more obscure. Total length 5·6 inches, culmen 0·55, wing 3·05, tail 2·5, tarsus 0·7.

The specimens from Natal and the Eastern Transvaal are decidedly brighter than those from the Western Cape Colony: but others from the eastern parts of the Colony approach the Natal birds in brilliancy of plumage.

Hab. South Africa, from the Cape Colony through Natal and the Transvaal to the Masai country in E. Africa.

a. Ad. sk.	South Africa.	Sharpe Coll.
b. Ad. sk.	South Africa (*E. L. Layard*).	Salvin-Godman Coll.
c. Ad. sk.	South Africa.	F. Campbell, Esq. [P.].
d. ♂ ad. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
e. ♂ ad. sk.	South Africa.	Sir A. Smith [C.].
f, g. Ad. sk.	George, Knysna (*H. Atmore*).	Sharpe Coll.
h. Ad. sk.	S.E. Africa.	Sharpe Coll.
i. ♂ ad. sk.	Eland's Post (*T. C. Atmore*).	Sharpe Coll.
k. ♀ ad. sk.	Natal, July 10 (*T. L. Ayres*).	Sharpe Coll.
l. ♂ ad. sk.	Macamac, E. Transvaal, June 19, 1874 (*T. L. Ayres*).	J. H. Gurney, Esq. [P.].

4. Serinus flaviventris.

Indian Greenfinch, *Edwards, Nat. Hist. B.* ii. p. 84, pl. 84 (1747).
Chloris indicus, *Seligm. Samml. ausl. Vög.* iv. Taf. 63 (1755).
Le Grosbec jaune du Cap de Bonne Espérance, *Briss. Orn.* iii. p. 227, pl. xi. fig. 2 (1760).
Le Verdier des Indes, *Briss. t. c.* p. 195 (1763).
Fringilla butyracea, *Linn. Syst. Nat.* i. p. 321 (1766, *nec* Loxia butyracea, *L.**); *Lath. Ind. Orn.* i. p. 455 (1790).

* Linnæus named two of these Seed-eaters *butyracea*, one being placed in his genus *Loxia* and the other in *Fringilla*. They are closely allied species of *Serinus*; and as the name has been productive of great confusion (*e. g.* the *S. butyraccus* with English authors being *S. flaviventris*, and with the Germans *S. icterus*), I have thought it better to drop the title in both instances, and use only the well-assured names of *S. flaviventris* an *S. icterus*.

Serin de Mozambique, *Daubent. Pl. Enl.* iv. pl. 364. fig. 1 (♂, *nec* fig. 2=S. icterus).
Yellow-bellied Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 138 (1783).
Yellow Finch, *Lath. t. c.* p. 299 (1783).
Loxia flaviventris, *Swains. Zool. Journ.* iii. p. 348 (1828); *Cab. Mus. Hein.* Th. i. p. 165 (1850); *Grill, Zool. Anteckn.* p. 24 (1859); *Layard, B. S. Afr.* p. 220 (1867); *id. Ibis*, 1869, p. 371; *Ayres, Ibis*, 1871, p. 267; *Bocage, Orn. Angola*, p. 369 (1881); *Salvin, Cat. Strickl. Coll.* p. 216 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 485 (1884).
Crithagra strigilata, *Swains. An. in Menag.* p. 317 (1837, ♀); *Gray, Gen. B.* ii. p. 385 (1844); *Layard, B. S. Afr.* p. 219 (1867); *id. Ibis*, 1869, p. 75.
Crithagra flava, *Swains. An. in Menag.* p. 318 (1837, ♂); *Gray, Gen. B.* ii. p. 385 (1844).
Crithagra butyracea, *Blyth, Cat. B. Mus. As. Soc.* p. 124 (1849); *Layard, B. S. Afr.* p. 219 (1867); *Ayres, Ibis*, 1869, p. 295; *Melliss, Ibis*, 1870, p. 101; *Gray, Hand-l. B.* ii. p. 100, no. 7488 (1870); *Sharpe, Cat. Afr. B.* p. 67 (1871); *Shelley, Ibis*, 1875, p. 80; *id. ed. Layard's B. S. Afr.* p. 487 (1884).
Serinus butyraceus, *Bp. Consp.* i. p. 522 (1850).

Adult male. General colour above yellowish green, with narrow blackish streaks down the centre of the feathers; the rump uniform and brighter yellow; lesser wing-coverts uniform greenish yellow; median and greater coverts blackish, edged with yellowish green; bastard-wing and primary-coverts blackish, fringed with dull yellow; quills blackish, edged with yellow, rather broader and brighter on the secondaries; upper tail-coverts dull yellowish, with blackish centres; tail-feathers blackish, edged with yellow; crown of head like the back, but less distinctly streaked with dusky; the forehead and a broad eyebrow golden yellow; lores dusky greenish; feathers round the eye yellow, as also the feathers below the eye; ear-coverts yellowish green; cheeks also bright yellow, with a dusky greenish streak from below the eye along the cheeks, leaving a golden-yellow patch on the fore part of the ear-coverts: under surface of body bright golden yellow; under wing-coverts and axillaries also golden yellow; quills below dusky, ashy along the inner edge. Total length 5·3 inches, culmen 0·4, wing 2·8, tail 2·15, tarsus 0·7.

Adult female. Different from the male. General colour above dull greenish, broadly streaked with blackish, the rump uniform dull green; upper tail-coverts dusky, edged with greenish; wing-coverts dusky brown, edged with pale yellowish, whiter at the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with pale yellow, whitish on the edge of the primaries and inner secondaries; upper tail-coverts dusky, with dull greenish margins; tail-feathers dusky brown, edged with pale yellow; crown of head more ashy than the back, and streaked with dusky blackish; lores, a narrow eyebrow, and the feathers round eye ashy whitish; ear-coverts ashy brown; cheeks ashy whitish like the under surface of the body, the throat uniform, the fore neck and breast slightly tinged with yellow and streaked with dusky brown; abdomen ashy whitish; sides of body and flanks ashy, streaked with dusky brown; thighs and under

tail-coverts ashy white, the latter centred with dusky blackish; under wing-coverts ashy washed with yellow; axillaries pale yellow; quills below dusky, ashy whitish along the inner edge. Total length 5 inches, culmen 0·4, wing 2·55, tail 2·15, tarsus 0·65.

Young male. Resembles the old female, but is much more mottled above, the back browner, with black centres and ochreous-buff edges; wings and tail much as in the adult female, but the wing-coverts tipped with tawny buff; the under surface of the body pale yellowish, thickly streaked with dusky blackish.

The *young female* appears to be more ashy above than the young male, and to be whiter below, thickly streaked with dusky brown.

Hab. South Africa.

a. ♂ ad. sk.	South Africa.	Old Coll.
b. ♂ ad.; *c.* [♀] juv. sk.	South Africa.	Purchased.
d. ♂ ad. sk.	South Africa.	Capt. Kellett [P.].
e. ♂ ad.: *f.* ♀ ad.; *g*, *h.* ♂ ♀ juv. sk.	South Africa.	Sir A. Smith [C.].
i, *k.* ♂ ♀ ad. sk.	South Africa.	Sharpe Coll.
l, *m.* ♂ ♀ ad.; *n.* ♂ juv. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
o. ♀ ad. sk.	Cape Colony (*C. J. Andersson*).	Sharpe Coll.
p. Juv. sk.	Cape Town (*E. L. Layard*).	Sharpe Coll.
q. Juv. sk.	Port Elizabeth.	Sharpe Coll.

5. Serinus imberbis.

Crithagra chloropsis (*nec Bp.*, 1850), *Cab. in Von der Decken's Reis.* iii. p. 30, pl. ix. (1869); *Finsch & Hartl. Vög. Ostafr.* p. 454 (1870); *Gray, Hand-l. B.* ii. p. 100, no. 7499 (1870); *Sharpe, Cat. Afr. B.* p. 67 (1871); *Gurney in Anderss. B. Dam.-Ld.* p. 182 (1872); *Fischer & Reichen. J. f. O.* 1879, p. 353; *Hartl. Abhandl. nat. Ver. Bremen*, viii. p. 204 (1882); *Boehm, J. f. O.* 1883, p. 201; *Schalow, t. c.* p. 364; *Sharpe, ed. Layard's B. S. Afr.* p. 486 (1884).

Crithagra sulphurata (*nec L.*), *Finsch & Hartl. Vög. Ostafr.* p. 453 (1870, *excl. syn.*) *.

Crithagra imberbis, *Cab. J. f. O.* 1868, p. 412 (*cf. Newton, Zool. Rec.* vi. p. 88).

Adult male. General colour above clear greenish yellow, with very faint indications of dusky centres to the feathers of the mantle and back; rump more uniform yellow, scarcely brighter than the back; lesser wing-coverts like the back; median and greater coverts blackish, broadly edged and tipped with yellow; bastard-wing, primary-coverts, and quills blackish, edged with yellow, broader on the secondaries; upper tail-coverts yellow; tail-feathers dusky brown, edged with yellow, fringed with white at the end of the inner webs; crown of head uniform greenish yellow, with very faint indications of narrow

* *C. sulphurata* is included in the 'Vögel Ostafrika's' from its supposed occurrence in the Zambesi region, as noticed by Livingstone. The specimens procured by the Livingstone Expedition belong, however, to *S. imberbis*.

dusky streaks; lores dusky, surmounted by a broad eyebrow from the base of the nostrils; eyelid yellow; ear-coverts greenish yellow, with a broad band of yellow across the fore part of the ear-coverts from below the eye; cheeks greenish yellow, bright yellow at the base of the lower mandible; throat and under surface of body golden yellow, with a slight greenish tinge on the sides of body and flanks; thighs, under tail-coverts, under wing-coverts, and axillaries bright yellow; quills below dusky, ashy along the inner edge. Total length 5 inches, culmen 0·45, wing 2·8, tail 1·85, tarsus 0·65.

Hab. South Africa from Great Namaqua-Land and Damara-Land to the Transvaal, and in East Africa as high as the Zanzibar district and Equatorial Africa.

a, *b*. ♂ ad. sk.	Tete, Zambesi.	Sir J. Kirk [C.].
c. ♂ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Coll.
d. ♂ ad. sk.	Macamac.	F. A. Barratt, Esq. [C.].
e. ♀ ad. sk.	Koy's Fountain, Great Namaqua-Land, June 19, 1862 (*C. J. Andersson*).	Sharpe Coll.
f. ♀ ad. sk.	Aamhoup, Great Namaqua-Land, July 4, 1861 (*C.J.A.*).	Sharpe Coll.
g. ♂ ad. sk.	Damara-Land (*C. J. A.*).	Sharpe Coll.

6. Serinus icterus.

Loxia butyracea, *Linn. Syst. Nat.* i. p. 304 (1766, *nec* Fringilla butyracea, *L.*).

Serin de Mozambique, *Daubent. Pl. Enl.* iv. pl. 364. fig. 2 (*nec* fig. 1).

Yellow-fronted Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 136 (1783).

Fringilla ictera, *Bonn. et Vieill. Enc. Méth.* iii. p. 972 (1823).

Crithagra chrysopyga, *Swains. B. W. Afr.* ii. p. 206, pl. 17 (1837); *Gray, Gen. B.* ii. p. 385 (1844); *Hartl. Orn. W.-Afr.* p. 154 (1857); *E. Newt. Ibis*, 1861, p. 272; *Hartl. J. f. O.* 1861, p. 260; *Kirk, Ibis*, 1864, p. 321; *Layard, B. S. Afr.* p. 219 (1867); *Sperling, Ibis*, 1868, p. 290; *Layard, Ibis*, 1869, p. 371; *Gray, Hand-l. B.* ii. p. 100, no. 7495 (1870); *Sharpe, Ibis*, 1870, p. 482; *id. Cat. Afr. B.* p. 67 (1871); *Ayres, Ibis*, 1871, p. 257; *Gurney in Anderss. B. Dam.-Ld.* p. 182 (1872); *Shelley & Buckley, Ibis*, 1872, p. 290; *Sharpe, P. Z. S.* 1873, p. 715; *Shelley, Ibis*, 1875, p. 80; *Nicholson, P. Z. S.* 1878, p. 130; *Ayres, Ibis*, 1880, p. 108; *Sharpe in Oates' Matabele Land*, App. p. 322 (1881); *Bocage, Orn. Angola*, p. 368 (1881); *Gurney, Ibis*, 1882, p. 73; *Shelley, t. c.* p. 358; *Schalow, J. f. O.* 1883, p. 364; *W. A. Forbes, Ibis*, 1883, p. 525; *Shelley, t. c.* p. 549; *Fischer, Zeitschr. ges. Orn.* i. p. 322 (1884); *Sharpe, Voy. 'Alert,'* p. 482 (1884).

Crithagra chrysopogon, *Gordon, Contr. Orn.* 1849, p. 9.

Fringilla (Dryospiza) aurifrons, *Heugl. Syst. Uebers.* p. 42 (1856).

Serinus icterus, *Bp. Consp.* i. p. 523 (1850); *Schl. P. Z. S.* 1866, p. 424.

Crithagra hartlaubi, *Bolle, J. f. O.* 1858, p. 355; *Gurney, P. Z. S.* 1864, p. 3; *Gray, Hand-l. B.* ii. p. 100, no. 7489 (1870); *Holub & Pelz. Beitr. Orn. Südafr.* p. 134 (1882).

? Crithagra barbata, *Heugl. J. f. O.* 1864, p. 248; *id. Orn. N.O.-Afr.* i. pt. 2, p. 649, iv. App. p. cxliv; *Gray, Hand-l. B.* ii. p. 100, no. 7491 (1870); *Hartl. Abhandl. nat. Ver. Bremen*, viii. p. 204 (1882).

Serinus flavifrons, *Pr. Württemb. MSS.*; *Heugl. J. f. O.* 1867, p. 297.
Crithagra crassirostris, *Peters, J. f. O.* 1868, p. 133; *Finsch & Hartl. Vög. Ostafr.* p. 458 (1870).
Serinus chrysopygus, *Heugl. J. f. O.* 1868, p. 95.
Crithagra mossambica, *Peters, J. f. O.* 1868, p. 134.
Crithagra butyracea, *Finsch & Hartl. Vög. Ostafr.* p. 455 (1870); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 371 (1870); *Salvin, Cat. Strickl. Coll.* p. 216 (1882); *Böhm, J. f. O.* 1883, p. 201; *Rochebr. Faun. Sénég., Ois.* p. 258 (1885).
Crithagra ictera, *Sharpe, ed. Layard's B. S. Afr.* pp. 485, 850 (1884).

Adult male. General colour above dull greenish, the feathers of the back centred with blackish, producing a streaked appearance; rump uniform bright yellow; lesser wing-coverts yellowish green; median and greater coverts blackish, edged and tipped with brighter yellow; bastard-wing, primary-coverts, and quills blackish, fringed with yellow, a little broader on the secondaries, which are edged with ashy at the tip; upper tail-coverts dusky brown, broadly edged with yellow; tail-feathers black, edged with yellow and tipped with ashy white, which enlarges into a spot at the end of the inner web; crown of head like the back but the streaks narrower; hind neck still more uniform; lores, feathers round eye, and ear-coverts slaty black, forming a black band, which is surmounted by a broad eyebrow of bright yellow which traverses the forehead; cheeks bright yellow, separated from the throat, which is also yellow, by a broad malar streak of black; remainder of under surface of body bright yellow; the sides of the breast, sides of body, and flanks ashy greenish; thighs and under tail-coverts pale yellow, the latter whitish towards their ends; under wing-coverts and axillaries ashy, edged with yellow; quills below dusky, ashy along the inner edge: "bill horn-brown, the mandible paler; feet dusky; iris umber-brown" (*Heuglin*). Total length 4·3 inches, culmen 0·4, wing 2·7, tail 1·7, tarsus 0·65.

Between the summer and *winter plumages* of the adult males there is no difference beyond that caused by wear and tear of the feathers. The latter become browner and get abraded to such an extent that the whole of the yellow margins to the wing-coverts are worn off and disappear. The sides of the upper breast are also much worn and become ashy in tint.

The *adult female* differs only from the male in being less brilliant in colour, being rather browner above, and in having the yellow edges to the wing-coverts more obscure. The yellow of the face and underparts is duller and there is a white spot on the chin. Total length 4·4 inches, culmen 0·35, wing 2·6, tail 1·8, tarsus 0·55.

The *young male* resembles the old female, but is browner above with only a tinge of yellow. The band through the eye is pale brown and consequently not so distinct, and the malar stripe is less strongly indicated, while the breast has always some dusky spots. Wing 2·65 inches.

The *young female* is like the young male, but is more plentifully spotted on the breast. Wing 2·4 inches.

West-African birds are decidedly smaller and somewhat brighter

than those from South Africa. In order to appreciate these differences, I have appended the length of wing to each specimen in the list below. Generally the wing is longest in South-African birds; Senegambian ones are slightly smaller or of about the same length, whilst the smallest are those from the forest-region of the West Coast. The grey head of the West-African birds also seems at first sight to separate them specifically, but East-African specimens appear to be intermediate.

Hab. West Africa from Senegambia to the Gold Coast; North-east Africa, and the whole of East Africa to Natal, Damara-Land, and Angola, but only extending as far as the Eastern Cape Colony. Introduced into Réunion and other islands.

a. Ad. sk.	Réunion (w. 2·55).	Sharpe Coll.
b. Ad. sk.	Mauritius (w. 2·6).	Zoological Society.
c. ♂ ad. sk.	Isle des Roches, Amirante group (*W. Coppinger*; w. 2·45).	Voy. H.M.S. 'Alert.'
d, *e*. Ad. sk.	South Africa (w. 2·75–2·8).	Sir A. Smith [C.].
f. Ad. sk.	Kingwilliamstown (w. 2·65).	Capt. Trevelyan [C.].
g, *h*. ♂ ad. sk.	Eland's Post, June 19, 1870 (*T. C. Atmore*; w. 2·6–2·7).	Sharpe Coll.
i. ♂ ad. sk.	Natal (*T. Ayres*; w. 2·55).	Salvin-Godman Coll.
k. Ad. sk.	Natal (w. 2·5).	T. Ayres, Esq. [C.].
l. ♂ ad.; *m*. ♂ imm. sk.	Pinetown, Natal, Feb. 25 (*T. L. Ayres*; w. 2·35–2·6).	Sharpe Coll.
n. ♀ imm. sk.	Pinetown, March 2 (*T. L. A.*; w. 2·5).	Sharpe Coll.
o, *p*. ♂ ad. sk.	Pinetown, June (w. 2·55).	Sharpe Coll.
q, *r*. ♀ ad. et juv. sk.	Pinetown, June (w. 2·4–2·45).	Sharpe Coll.
s, *t*. ♂ ♀ ad. sk.	Pinetown, Oct. (w. 2·6).	Sharpe Coll.
u. ♂ juv. sk.	Transvaal (*T. Ayres*; w. 2·7).	Sharpe Coll.
v. ♀ juv. sk.	Rustenberg, E. Transvaal (*W. Lucas*).	Sharpe Coll.
w. ♀ ad. sk.	Tati, Matabele Land, Oct. 9, 1874 (*F. Oates*; w. 2·4).	W. E. & C. G. Oates, Esqrs. [C.].
x. Ad. sk.	Tete, Zambesi (w. 2·65).	Sir J. Kirk [C.].
y. Juv. sk.	Shupanga, Zambesi.	Sir J. Kirk [C.].
z. Ad. sk.	Damara-Land (*C. J. Anderssoni*; w. 2·65).	Sharpe Coll.
a'. ♀ ad. sk.	Elephant Vley, Damara-Land, July 22 (*C. J. A.*; w. 2·65).	Sharpe Coll.
b'. ♂ ad. sk.	Elephant Vley, Oct. 19 (*C. J. A.*; w. 2·75).	Sharpe Coll.
c'. ♀ ad. sk.	Rio Chimba (*Anchieta*; w. 2·65).	Sharpe Coll.
d'. Ad. sk.	Mombasa (*Wakefield*; w. 2·45).	Sharpe Coll.
e'. Ad. sk.	Mombasa (*Wakefield*; w. 2·4).	Rev. A. Buxton [P.].
f'. Ad. sk.	Senegal (w. 2·45).	Purchased.
g', *h'*, *i'*. imm. sk.	River Gambia (w. 2·4–2·65).	Purchased.
k'. Ad. sk.	River Gambia (w. 2·8).	Sharpe Coll.
l'. Ad. sk.	Elmina, April (*H. F. Blissett*; w. 2·35).	Sharpe Coll.

m', *n'*. Ad. sk.	Accra (*J. Smith*; w. 2·4).	Sharpe Coll.
o'. Ad. sk.	Ashanti (w. 2·35).	J. Gould, Esq.
p', *q'*. Ad. sk.	River Volta (*H. T. Ussher*; w. 2·4–2·45).	Sharpe Coll.
r'. Ad. sk.	Abeokuta (w. 2·45).	F. Nicholson, Esq. [P.].
s'. ♂ ad. sk.	Abutchi, R. Niger (*W. A. F.*; w. 2·4).	Forbes Coll.

7. Serinus capistratus.

Crithagra capistrata, *Finsch in Finsch & Hartl. Vög. Ostafr.* p. 458 (1870); *Sharpe, P. Z. S.* 1873, p. 717; *id. & Bouv. Bull. Soc. Zool. France*, i. p. 49 (1876); *Reichen. J. f. O.* 1877, p. 29; *Bocage, Orn. Angola*, p. 367 (1881).
Crithagra barbata (*nec Heugl.*), *Reichen. Corresp. Afrik. Gesellsch.* 1875, no. 10, p. 180.

Adult male. General colour above greenish yellow, streaked with dusky blackish down the centre of the feathers; rump and upper tail-coverts clearer yellow and uniform; lesser wing-coverts like the back; median and greater coverts blackish, edged and broadly tipped with yellow; bastard-wing, primary-coverts, and quills blackish, edged with yellow, broader on the secondaries; tail-feathers blackish, edged with greenish yellow; crown of head of the same colour as the back but more uniform, with scarcely any dusky stripes; lores and a narrow frontal line of black, surmounted by an eyebrow and broad frontal band of golden yellow; feathers round eye and below the latter, as well as the fore part of the ear-coverts and of the cheeks, black; remainder of ear-coverts and hinder cheeks greenish yellow, the latter brighter; chin black; throat and under surface of body golden yellow, with a few narrow dusky streaks on the flanks, which are slightly greener; thighs, under tail-coverts, under wing-coverts, and axillaries yellow like the breast; quills below dusky, ashy along the inner edge. Total length 4·2 inches, culmen 0·4, wing 2·4, tail 1·55, tarsus 0·5.

Adult female. Not so brightly coloured as the male and rather greener, the head being distinctly streaked with dusky blackish; the forehead like the crown and not showing a frontal band; a pale yellow eyebrow; lores dusky; feathers round the eye pale yellow; ear-coverts greenish; under surface of body yellow, streaked with dusky blackish on the throat and chest; sides of breast and flanks greener. Total length 4·4 inches, culmen 0·45, wing 2·4, tail 1·6, tarsus 0·55.

Young. Like the adult female but much duller in colour.

Hab. Congo region, West Africa.

a. ♂ ad. sk.	Congo River.	Commander Sperling [C.].
b, *c*. ♂ ♀ ad.; *d*. ♀ juv. sk.	Landana, Congo (*L. Petit*).	Sharpe Coll.

8. Serinus albigularis.

Crithagra albogularis, *Smith, S.-Afr. Quart. Journ.* ii. p. 48 (1833); *Gray, Hand-l. B.* ii. p. 100, no. 7494 (1870); *Sharpe, Ann. & Mag. Nat. Hist.* (4) viii. p. 236 (1871); *id. Cat. Afr. B.* p. 67 (1871); *Salvin, Cat. Strickl. Coll.* p. 217 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 485 (1884).

Crithagra selbyi, *Smith, Rep. S.-Afr. Exped.*, App. p. 50 (1836); *Swains. An. in Menag.* p. 319 (1837); *Gray, Gen. B.* ii. p. 385 (1844); *Layard, B. S. Afr.* p. 219 (1867); *id. Ibis*, 1869, pp. 75, 371.

Crithagra cinerea, *Swains. Classif. B.* ii. p. 294 (1837).

Crithagra sulphurata, juv., *Jard. & Selby, Ill. Orn.* ii. pl. 104. fig. 2 (c. 1839).

Buserinus albigularis, *Bp. Consp.* i. p. 522 (1850).

Adult. General colour above ashy brown, streaked with dusky brown, the rump and upper tail-coverts greenish yellow, some of the lateral ones brown washed with yellow; lesser wing-coverts uniform brown; median and greater coverts dark brown, edged with ashy brown, the latter with whity brown towards the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with whity brown, the inner secondaries with pale isabelline; tail-feathers dark brown, edged with whity brown, slightly tinged with yellow; crown of head like the back, and similarly streaked; lores dusky, surmounted by a narrow streak of white, continued into a small eyebrow: ear-coverts and cheeks ashy brown, with a faintly indicated streak of white across the ear-coverts, the fore part of the cheeks white; throat white; sides of neck, fore neck, and remainder of under surface of body pale ashy brown, the lower breast and abdomen white; sides of body and flanks pale ashy brown like the breast; thighs ashy brown; under tail-coverts white; under wing-coverts and axillaries pale ashy brown, the lower coverts whitish at the ends; quills below dusky, ashy along the inner edge. Total length 6·2 inches, culmen 0·55, wing 3, tail 2·3, tarsus 0·85.

The *female* apparently only differs from the male in having some dusky spots on the throat, but I have no sexed specimens before me.

Hab. South Africa.

a. Ad. sk.	South Africa.	Sir A. Smith [C.].
b, e, d. Ad. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
e. Ad. sk.	South Africa.	Sharpe Coll.

9. Serinus crocopygius*. (Plate VIII.)

Buserinus albigularis (*nec Smith*), *Monteiro, P. Z. S.* 1865, p. 95; *Boeage, Orn. Angola*, p. 369 (1881).

Poliospiza crocopygia, *Sharpe, Ibis*, 1871, p. 101; *id. Cat. Afr. B.*

* Lettered *Crithagra crocopygia* on the Plate.

p. 68 (1871); *Gurney in Anderss. B. Dam.-Ld.* p. 184 (1872); *Sharpe, ed. Layard's B. S. Afr.* p. 483 (1884).

Crithagra crocopygia, *Sharpe, Ann. & Mag. N. H.* (4) viii. p. 235 (1871).

Adult male (type of species). General colour above pale brown, broadly streaked with darker brown down the centre of the feathers; lower back and rump clear yellow; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills blackish brown, edged with paler brown, whitish towards the ends of the greater coverts and along the outer web of the secondaries; upper tail-coverts pale brown, washed laterally with yellow; tail-feathers dark brown, edged with paler brown, slightly tinged with yellow; crown of head like the back, but somewhat more narrowly streaked; lores brown, surmounted by a narrow white eyebrow; feathers round eye whitish, as also a spot below the eye; ear-coverts and sides of face brown, the fore part of the cheeks whitish, as well as a bar across the hinder cheeks from below the ear-coverts; throat white; remainder of under surface from the fore neck downwards pale ashy brown, becoming lighter on the breast and abdomen, the latter whiter towards the vent; sides of body and flanks light ashy brown; thighs pale ashy; under tail-coverts isabelline; under wing-coverts and axillaries very pale ashy brown; quills below dusky, pale ashy along the inner edge. Total length 5·7 inches, culmen 0·55, wing 3·2, tail 2·1, tarsus 0·7.

Adult female. Like the male. Total length 5 inches, culmen 0·55, wing 3·15, tail 2, tarsus 0·8.

Hab. South-western Africa from Great Namaqua-Land to Damara-Land and Benguela.

a. ♀ ad. sk.	Koy's Fountain, Great Namaqua-Land, June 18, 1862 (*C. J. Andersson*).	Sharpe Coll.
b. ♀ ad. sk.	Otjimbinque, Damara-Land, Aug. 4, 1866 (*C. J. A.*).	Sharpe Coll.
c. ♂ ad. sk.	Davitjob, near Otjimbinque, June 9, 1864 (*C. J. A.*).	Sharpe Coll. (Type of species.)
d. ♂ ad. sk.	West of Tjobis, Swart River, April 3, 1865 (*C. J. A.*).	Sharpe Coll.
e. ♂ ad. sk.	Swakop River, Oct. 26, 1860 (*C. J. A.*).	Sharpe Coll.
f. ♂ ad. sk.	Damara-Land.	C. J. Andersson, Esq. [C.].
g. Ad. sk.	Benguela.	J. J. Monteiro, Esq. [C.].

10. Serinus leucopterus *. (Plate IX.)

Crithagra leucoptera, *Sharpe, Ann. & Mag. N. H.* (4) viii. p. 235 (1871).

Adult (type of species). General colour above uniform brown with a slight olive-yellow tinge, the rump uniform with the back;

* Lettered *Crithagra leucoptera* on the Plate.

lesser wing-coverts like the back; median and greater coverts dark brown, externally edged with the same colour as the back and tipped with white, forming a double wing-bar; bastard-wing, primary-coverts, and quills dark brown, edged with olive, the inner secondaries whity brown at the ends of the inner web; upper tail-coverts like the back, with small whitish tips; tail-feathers dark brown, edged with dull olive-yellow; crown of head like the back, but broadly centred with dull blackish brown, the forehead tinged with yellow; lores dull ashy; feathers round eye, ear-coverts, and cheeks dusky brown, with a pale streak across the lower ear-coverts; throat white, mottled with blackish spots on the chin and upper throat; remainder of under surface pale ashy brown, rather lighter than the back and tinged with olive-yellow, with which some of the feathers are edged; sides of body and flanks like the breast; thighs dark brown; vent and under tail-coverts whitish, slightly tinged with yellow; under wing-coverts and axillaries like the breast; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·55, wing 2·45, tail 2·25, tarsus 0·75.

Hab. South Africa.

a. Ad. sk. South Africa (*E. L. Layard*). Sharpe Coll. (Type of species.)

11. Serinus scotops.

Crithagra scotops, *Sunder. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 98; *Grill, Zool. Anteckn.* p. 24 (1859); *Layard, B. S. Afr.* p. 218 (1867); *Gray, Hand-l. B.* ii. p. 100, no. 7504 (1870); *Sharpe, Cat. Afr. B.* p. 67 (1871); *Ayres, Ibis*, 1876, p. 431; *Butler, Feilden, & Reid, Zool.* 1882, p. 301; *Sharpe, ed. Layard's B. S. Afr.* pp. 487, 850 (1884).

Adult male. General colour above yellowish green, rather broadly streaked with black centres to the feathers, the rump uniform yellowish green, rather brighter; lesser wing-coverts uniform yellowish green; median and greater coverts blackish, externally edged and tipped with brighter yellow, especially on the latter: bastard-wing and primary-coverts blackish, fringed with yellow; quills blackish, edged with yellow, broader and rather brighter on the secondaries; upper tail-coverts yellowish green, streaked with dusky blackish; tail-feathers dusky blackish, edged with yellow; crown of head like the back, but more narrowly streaked with blackish; lores, base of forehead, and feathers at base of bill dusky blackish; a distinct eyebrow of golden yellow; ear-coverts and cheeks uniform yellowish green like the sides of the neck; chin dusky ashy; remainder of the throat golden yellow; fore neck uniform yellowish green; chest and remainder of under surface of body golden yellow, the sides of body and flanks streaked with dusky blackish; thighs yellowish green; under tail-coverts yellow; under wing-coverts and axillaries yellow; quills below dusky, ashy along the inner edge. Total length 4·8 inches, culmen 0·45, wing 2·55, tail 1·9, tarsus 0·65.

Adult female. Differs from the male in not having the blackish throat-spot, and in having the lores and feathers round the eye ashy instead of blackish. The chin is ashy, and the remainder of the under surface of the body is yellow, not so bright as in the male; the fore neck and breast greenish, and striped with dusky black like the sides of the body. Total length 4·8 inches, culmen 0·45, wing 2·55, tail 2·1, tarsus 0·65.

The male from Macamac has rather a smaller bill, the general tone of the colour is rather brighter, and the chin-spot is smaller.

Hab. South Africa, eastwards from the Knysna districts to Natal and the Eastern Transvaal.

a. ♀ ad. sk.	South Africa.	Mr. J. Abraham [P.].
b. ♂ ad. st.	South Africa.	Sir A. Smith [C.].
c. ♂ ad.; *d*, *e*. ♀ ad.; *f*. Juv. sk.	South Africa.	Sir Andrew Smith [P.].
g. ♂ ad. sk.	Knysna, Sept. 5, 1866 (*C. J. Andersson*).	Sharpe Coll.
h. ♂ ad. sk.	Forests near Eland's Post (*T. C. Atmore*).	Sharpe Coll.
i. ♂ ad. sk.	Katberg Forests (*T. C. Atmore*).	Sharpe Coll.
k. ♀ ad. sk.	Lydenburg, E. Transvaal.	F. Barratt, Esq. [C.].
l. ♂ ad. sk.	Macamac, June 19, 1874 (*T. L. Ayres*).	J. H. Gurney, Esq. [P.].

12. Serinus striolatus.

Pyrrhula striolata, *Rüpp. Neue Wirb., Vög.* p. 99, Taf. 37. fig. 1 (1835–40); *id. Syst. Uebers.* p. 79 (1845); *Heugl. Syst. Uebers.* p. 44 (1856); *Brehm, Reis. Habesch*, p. 349 (1863).

Serinus striolatus, *Bp. Consp.* i. p. 522 (1850); *Heugl. J. f. O.* 1862, p. 31, 1868, p. 94.

Crithagra striolata, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 653 (1870); *Gray, Hand-l. B.* ii. p. 100, no. 7492 (1870); *Blanf. Geol. & Zool. Abyss.* p. 413 (1870); *Finsch, Trans. Z. S.* vii. p. 270 (1870); *Salvin, Cat. Strickl. Coll.* p. 217 (1882); *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 171 (1884).

Poliospiza striolata, *Fischer in Madarász, Zeitschr. ges. Orn.* i. p. 321 (1884); *Shelley, P. Z. S.* 1885, p. 228.

Adult. General colour above brown, streaked with blackish brown, the feathers of the mantle and back broadly edged with whity brown; the rump rather lighter than the back; lesser wing-coverts brown; median and greater coverts dark brown, edged with lighter brown, whitish at the ends; bastard-wing, primary-coverts, and quills blackish brown, edged with pale brown, whity brown on the inner secondaries, the primaries margined with dull olive-yellow; upper tail-coverts light brown, centred with blackish-brown streaks; tail-feathers blackish brown, edged with olive-yellow; crown of head brown, streaked with black and white, the feathers being black in the centre and edged with white; lores blackish, surmounted by a narrow white eyebrow; feathers round eye blackish, with a crescentic line of white below the eye; ear-coverts and sides of face blackish brown,

with a whitish bar across the fore part of the ear-coverts; fore part of cheeks also whitish; throat and under surface of body dull white, the fore neck, chest, sides of body, and flanks broadly streaked with black; thighs brown; under tail-coverts dull white, mesially streaked with black; under wing-coverts and axillaries dull whitish, tinged with olive-yellow; quills below dusky, ashy along the inner edge: "bill dusky horn-colour, the lower mandible paler; feet dusky reddish; iris dusky brown" (*Heuglin*). Total length 5·2 inches, culmen 0·5, wing 2·9, tail 2·4, tarsus 0·85.

Adult female. Similar to the male. Total length 5·1 inches, culmen 0·55, wing 2·6, tail 2·3, tarsus 0·8.

The specimen from Kilima-njaro has a yellowish chin and more olive-yellow on the wing-coverts, but as some of the Abyssinian specimens also show a little of the latter colour, there is probably no real difference between birds from the two localities.

Hab. Abyssinia, extending to Masai-Land in East Africa.

a.	Ad. sk.	N.E. Africa.	Purchased.
b.	♂ ad. sk.	Alagi Pass, S. of Antalo, May 9, 1868.	W. T. Blanford, Esq. [C.].
c.	♀ ad. sk.	Senafé, Tigré, Feb. 25, 1868.	W. T. Blanford, Esq. [C.].
d.	Ad. st.	Abyssinia.	Dr. Rüppell [P.].
e.	♂ ad. sk.	Shoa, Feb. 1842 (*Sir W. C. Harris*).	India Museum.
f.	♂ ad. sk.	Ankober, Aug. 1842 (*Sir W. C. Harris*).	India Museum.
g.	Ad. sk.	Kilima-njaro.	H. H. Johnston, Esq. [C.].

13. Serinus burtoni*. (Plate VII.)

Strobilophaga burtoni, *Gray, Ann. & Mag. Nat. Hist.* (3) x. p. 444 (1862); *Sharpe, P. Z. S.* 1871, p. 615.

Pinicola burtoni, *Gray, Hand-l. B.* ii. p. 109, no. 7641 (1870); *Reichen. J. f. O.* 1875, p. 50.

Adult. General colour above brown, with darker brown centres, the edges somewhat olive; lesser wing-coverts like the back; median and greater coverts blackish, edged with olive, and tipped with a white spot; bastard-wing and primary-coverts blackish, fringed with olive; quills blackish, edged with olive-yellow, brighter on the primaries, the inner secondaries white near the end of the outer web; upper tail-coverts brown, edged with olive; tail-feathers dusky brown, margined with dull olive-yellow: crown of head like the back, slightly streaked with pale olive-yellow on the fore part of the crown, the feathers being edged with this colour; a large spot of white at the base of the forehead; lores, sides of face, ear-coverts, cheeks, throat, sides of neck, and fore neck dark brown, with a slightly indicated pale streak above the ear-coverts, the fore part of the face and throat blacker; remainder of under surface of body creamy buff, the sides of body and flanks somewhat tinged with

* *Crithagra burtoni* on the Plate.

ashy and broadly streaked with blackish centres to the feathers; thighs and under tail-coverts isabelline buff, with black centres to the feathers; under wing-coverts and axillaries olive-yellow, the former with dusky bases; quills below dusky, ashy along the inner edge. Total length 6·2 inches, culmen 0·65, wing 3·6, tail 2·6, tarsus 0·85.

The *female* is not yet recognized, but it will probably be found to resemble the adult male.

Hab. Mountains of Cameroons, West Africa.

a. Ad. sk.	Cameroons.	Sir R. Burton [P.]. (Type of species.)
b, c. ♂ ad. sk.	Cameroons (*H. H. Johnston*).	Brit. Assoc. [P.].

14. Serinus xanthopygius.

Serinus xanthopygius, *Rüpp. Neue Wirb.* p. 96, Taf. 35. fig. 1 (1835–40); *id. Syst. Uebers.* p. 77 (1845).
Fringilla xanthopygia, *Des Murs in Lefebvre, Voy. Abyss.* p. 174 (1845); *Gray, Gen. B.* ii. p. 371 (1849); *Heugl. J. f. O.* 1868, p. 90; *Gray, Hand-l. B.* ii. p. 83, no. 7211 (1870).
Fringilla (Dryospiza) xanthopygia, *Heugl. Syst. Uebers.* p. 42 (1856).
Poliospiza xanthopygia, *Bp. Consp.* i. p. 520 (1850); *Heugl. Orn. N.O.-Afr.* i. p. 641 (1870), iv. p. clxiii (1871).
Fringilla uropygialis, *Hempr. & Ehr. in Mus. Berol., undè*
Carpodacus uropygialis, *Licht. Nomencl. Av.* p. 48 (1845).
Crithagra xanthopygia, *Blyth, J. A. S. Beng.* xxiv. p. 257 (1855); *Finsch, Trans. Z. S.* vii. p. 270 (1870); *Salvad. Ann. Mus. Civic.* (2) i. p. 171 (1884).
Poliospiza uropygialis, *Heugl. in Petern. Mitth.* 1861, p. 24.
Fringilla (Poliospiza) xanthopygia, *Blanf. Geol. & Zool. Abyss.* p. 413 (1870).

Adult. General colour above ashy brown, streaked with blackish centres to the feathers of the mantle and upper back; lower back and rump clear sulphur-yellow; upper tail-coverts ashy brown, washed with olive-yellow; wing-coverts uniform brown; bastard-wing, primary-coverts, and quills dark brown, fringed with whity brown, slightly tinged with olive; tail-feathers brown, edged with ashy olive; head a little lighter ashy than the back, with dusky blackish streaks on the crown; sides of face, region of the eye, cheeks, and ear-coverts uniform ashy brown, with a few ashy plumes below the eye; throat uniform creamy white, with a slight dusky malar streak; fore neck, breast, and sides of the body pale ashy; abdomen and under tail-coverts white; sides of body perceptibly streaked with dusky; thighs ashy; axillaries and under wing-coverts whity brown; quills below dusky, ashy isabelline along the inner web: "bill reddish horn-colour, the lower mandible yellowish white: feet dusky reddish; iris dusky" (*Heuglin*). Total length 4·4 inches, culmen 0·4, wing 2·75, tail 1·8, tarsus 0·6.

Hab. Abyssinia, to the Bogos Country and southwards to Shoa; Arabia.

a. Ad. sk.	Abyssinia.	Dr. Rüppell [C.].
b. Ad. sk.	Senafé, Tigré, Feb. 25, 1868.	W. T. Blanford, Esq. [P.].

15. Serinus leucopygius.

? Senegali Chanteur, *Vieill. Ois. Chant.* pl. 11 (1805).
? Fringilla musica, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 210 (1817)*.
? Fringilla angolensis, *Vieill. N. Dict. d'Hist. Nat.* xxx. p. 575 (1829).
? Estrelda musica, *Gray, Gen. B.* ii. p. 369 (1849).
Crithagra leucopygia, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 127; *Bp. Consp.* i. p. 523 (1850).
Serinus leucopygos, *Bp. Consp.* i. p. 523 (1850); *Heugl. J. f. O.* 1862, p. 31.
Hypochera musica, *Bp. Consp.* i. p. 450 (1850); *Hartl. Orn. W.-Afr.* p. 149 (1857); *id. J. f. O.* 1861, p. 259.
Dryospiza leucopygos, *Licht. Nomencl. Av. Berol.* p. 46 (1854).
Fringilla (Dryospiza) leucopygia, *Heugl. Syst. Uebers.* p. 41 (1856).
Crithagra musica, *Heugl. Orn. N.O.-Afr.* i. p. 651 (1870); *Rochebr. Faun. Sénég., Ois.* p. 258 (1885).
Crithagra leucopygos, *Gray, Hand-l. B.* ii. p. 100, no. 7496 (1870); *Hartl. Abhandl. nat. Ver. Bremen*, vii. p. 105 (1881).

Adult male. General colour above light ashy brown, slightly streaked with dusky brown centres to the feathers; rump white, preceded by a blackish bar across the lower back; lesser wing-coverts ashy; the remainder of the coverts and quills brown, edged with ashy brown or whity brown; upper tail-coverts and tail-feathers brown, edged with ashy brown; crown of head and hind neck like the back, but a little paler and more ashy, distinctly streaked with dusky brown central stripes to the feathers; hind neck uniform ashy; lores and sides of face pale ashy grey; throat ashy whitish, browner on the fore neck and chest; on the fore neck a few dusky spots; breast and abdomen white, as also the flanks, the latter streaked with brown and washed with pale ashy brown; thighs and under tail-coverts white; under wing-coverts and axillaries ashy brown, edged with whitish; quills below dusky, ashy isabelline along the inner edge: "bill and claws fleshy, tinged with dusky horn-colour; legs fleshy; iris umber-brown" (*Heuglin*). Total length 4·3 inches, culmen 0·35, wing 2·5, tail 1·65, tarsus 0·55.

The Senaar specimen has the fore neck uniform, without any dusky spots. Another specimen from the Gambia agrees with the Senaar birds, but is apparently either a female or a younger bird, as it has the throat white, the lower throat, fore neck, and chest spotted with dusky brown.

Hab. North-eastern and Equatorial Africa.

a. Ad. sk.	Senaar (*Hedenborg*).	Sharpe Coll.
b. Ad.; *c*. Juv. sk.	River Gambia.	Sharpe Coll.
d. Ad.; *e*. Imm. sk.	River Gambia.	Purchased.
f. ♂ ad. sk.	Rodjaf, Eq. Africa, July 7, 1880 (*Emin Bey*).	Sharpe Coll.

* I do not adopt this name of Vieillot's, as his description is by no means correct, the rump being described as "greyish." His "Senegali Chanteur" is probably *S. angolensis*, to which species Vieillot himself was inclined to refer it in 1819. As we have the definite and characteristic name of *leucopygius* to fall back upon, it would, in my opinion, be wrong to substitute that of Vieillot for it.

16. Serinus angolensis *.

Linnets from Angola, *Edwards, Nat. Hist. B.* iii. pl. 129 (1750).
La Linotte d'Angola, *Briss. Orn.* vi. App. p. 81 (1760).
La Vengoline, *Montb. Hist. Nat. Ois.* iv. p. 80 (1778).
Angola Finch, *Lath. Gen. Syn.* ii. pt. i. p. 309 (1783).
Fringilla angolensis, *Gm. Syst. Nat.* i. p. 918 (1788); *Layard, B. S. Afr.* p. 203 (1867); *Gray, Hand-l. B.* ii. p. 83, no. 7212 (1870).
Fringilla tobaca, *Bonn. et Vieill. Enc. Méth.* iii. p. 969 (1823).
Linaria atrigularis, *Smith, Rep. S. Afr. Exped.* p. 49 (1836).
Fringilla atrogularis, *Gray, Gen. B.* ii. p. 372 (1849).
Poliospiza atrogularis, *Bp. Consp.* i. p. 520 (1850).
Crithagra angolensis, *Bp. Consp.* i. p. 520 (1850); *Sharpe, Cat. Afr. B.* p. 67 (1871); *Gurney in Anderss. B. Damara-Land*, p. 182 (1872); *Bocage, Orn. Angola*, p. 366 (1881); *Sharpe in Oates' Matabele Land, App. Birds*, p. 322 (1881); *id. ed. Layard's B. S. Afr.* pp. 484, 850 (1881).
Poliospiza angolensis, *Hartl. Orn. W.-Afr.* p. 150 (1857); *id. J.f. O.* 1861, p. 259.
Crithagra atrogularis, *Reichen. J. f. O.* 1877, p. 29; *Fischer, in Mádarasz, Zeitschr. ges. Orn.* i. p. 322 (1884).

Adult male. General colour above pale brown, broadly streaked with blackish brown down the centre of the feathers: the mantle-feathers edged with whity brown; rump bright yellow; wing-coverts like the back, the greater coverts margined with whitish towards the tips; bastard-wing, primary-coverts, and quills dusky brown, fringed with dull yellow, the secondaries whity brown towards the ends; upper tail-coverts pale brown with dark centres, and broadly edged and tipped with white; tail-feathers dark brown, edged with white along the inner web and broadly tipped with the same, the white increasing towards the outside of the tail, the outer feather being white for its terminal third; crown of head a little more ashy than the back, and similarly streaked with black; lores dull ashy; a narrow superciliary line of white; ear-coverts ashy brown; cheeks ashy whitish, diagonally crossed with a blackish streak; throat and fore neck black, the chin ashy whitish; remainder of under surface of body dull white; the breast and sides of the body and flanks pale isabelline, narrowly streaked with blackish; thighs and under tail-coverts ashy white; under wing-coverts ashy whitish; axillaries whitish, washed with yellow; quills below dusky, ashy along the inner edge: "bill brownish; legs flesh-colour; iris brown" (*F. Bradshaw*). Total length 4·6 inches, culmen 0·4, wing 2·75, tail 1·75, tarsus 0·5.

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* It appears to me that there are two species confounded under the heading of *S. angolensis*. The specimen received from the Zoological Society has the under surface of the body brown instead of dull whitish; but I have not seen a similar specimen captured in a wild state, and I do not like to separate it on the strength of a caged specimen. Edwards's bird seems to have been this brown-breasted form, which, if distinct, will therefore bear the name of *S. angolensis*, while the white-breasted form will have to be called *Serinus atrigularis* of Smith.

Adult female. Apparently similar to the male, but not having the same amount of black on the throat, the black not being uniform but broken up into spots. Total length 4·4 inches, culmen 0·35, wing 2·7, tail 1·75, tarsus 0·5.

Young males apparently resemble the adult female, but are more spotted with blackish below on the throat and breast.

I have not been able to trace the changes of plumage in this species satisfactorily, owing to a lack of properly sexed and dated specimens; but it seems to me probable that the males have also spotted throats in winter, and that the uniform black throat is a sign of breeding-plumage.

Hab. South Africa generally, extending to Angola on the west coast and to Masai-Land in East Africa.

a, *b*, *c*. ♂ ad.; *d*. Juv. sk.	South Africa.	Sir A. Smith [C.]. (Types of *L. atrigularis*.)
e. ♂ imm. sk.	Orange River, Feb. 21, 1881.	Dr. F. Bradshaw [P.].
f. ♂ ad. sk.	Makalaka Kraal, Zambesi road, Aug. 20, 1874 (*F. Oates*).	W. E. & C. G. Oates, Esqrs. [P.].
g. ♂ juv. sk.	Otjusavahami, Damara-Land, July 12, 1866 (*C. J. Andersson*).	Sharpe Coll.
h, *i*. Ad. sk.	Elephant Vley, Aug. 15 (*C. J. A.*).	Sharpe Coll.
k. ♂ ad. sk.	Elephant Vley, Aug. 22 (*C. J. A.*).	Sharpe Coll.
l. Juv. sk.	Matalko, July 17 (*C. J. A.*).	Sharpe Coll.
m. Ad. sk.	South Africa.	Zoological Society.

17. Serinus serinus.

Le Serin, *Briss. Orn.* iii. p. 179 (1760).

Fringilla serinus, *Linn. Syst. Nat.* i. p. 320 (1766); *Temm. Man. d'Orn.* i. p. 356 (1820); *Naum. Vög. Deutschl.* v. pl. 123 (1826); *Werner, Atlas, Granivores*, pl. 43 (1827); *Bp. Faun. Ital., Ucc.* pl. 37 (1832–41); *Gray, Gen. B.* ii. p. 371 (1849); *Kjærb. Danm. Fugle*, pl. 27. fig. 5 (1852); *Gray, Hand-l. B.* ii. p. 83, no. 7206 (1870); *Fritsch, Vög. Eur.* pl. 17. fig. 9 (c. 1870); *Fallon, Ois. Belg.* p. 100 (1875).

Loxia serinus, *Scop. Ann.* i. p. 140 (1769); *Meyer u. Wolf, Taschenb.* p. 146 (1810).

Le Serin de Provence, *Daubent. Pl. Enl.* iv. pl. 658. fig. 1.

Serin Finch, *Lath. Gen. Syn.* ii. pt. i. p. 296 (1783).

Fringilla montana (*nec L.*), *Bodd. Tabl. Pl. Enl.* p. 40 (1783).

Fringilla citrinella (*nec L.*), *Bechst. Orn. Taschenb.* p. 124, tab. 15 (1802).

Serinus hortulanus, *Koch, Syst. baier. Zool.* p. 229 (1816); *Cab. Mus. Hein.* Th. i. p. 163 (1850); *Godman, Ibis*, 1866, p. 98; *Lilford, t. c.* p. 176; *Rowley, t. c.* p. 215; *Tristr. Ibis*, 1868, p. 207; *Gould, B. Gt. Br.* iii. pl. 38 (c. 1870); *Saunders, Ibis*, 1871, p. 220; *Salvad. Faun. Ital., Ucc.* p. 158 (1871); *Shelley, B. Egypt*, p. 154 (1872); *Brooke, Ibis*, 1873, p. 247; *Dresser, B. Eur.* iii. p. 549, pl. 172 (1875); *Irby, B. Gibr.* p. 123 (1875); *Wharton, Ibis*, 1875, p. 25; *Danf. Ibis*, 1878, p. 20; *Salvin, Cat. Strickl. Coll.*

p. 215 (1882); *B. O. U. List Brit. B.* p. 49 (1883); *Gigl. Iconogr. Avif. Ital.* part xvii (1882); *Irby, Ibis*, 1883, p. 83; *Saunders, Ibis*, 1884, p. 375; *Tristr. Faun. & Flor. Palest.* p. 65 (1884); *Whitehead, Ibis*, 1885, p. 39; *Reid, t. c.* p. 245; *Gigl. Avif. Ital.* p. 31 (1886); *Salvad. Elench. Ucc. Ital.* p. 175 (1887).

Loxia serinus an nov. sp. ?, *Faber, Isis*, 1824, Suppl. p. 792.

Serinus orientalis, *Brehm, Vög. Deutschl.* p. 254 (1831).

Serinus meridionalis, *Brehm, t. c.* p. 255 (1831); *Bp. Comp. List B. Eur. & N. Am.* p. 34 (1838); *id. Consp.* p. 523 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 117 (1859); *Salvin, Ibis*, 1859, p. 313; *Loche, Expl. Sci. Algér., Ois.* i. p. 157 (1867); *Degl. et Gerbe, Orn. Eur.* i. p. 285 (1867); *Dodrl. Avif. Sicil.* p. 83 (1869).

Serinus islandicus, *Brehm, t. c.* p. 255 (1831).

Serinus flavescens, *Gould, B. Eur.* iii. pl. 195 (1837).

Pyrrhula (Dryospiza) serinus, *Keys. u. Blas. Wirb. Eur.* p. 41 (1840).

Pyrrhula serinus, *Mühle, Beitr. Orn. Griechenl.* p. 46 (1844); *Degl. Orn. Eur.* i. p. 193 (1849); *Linderm. Vög. Griechenl.* p. 58 (1860); *Wright, Ibis*, 1864, p. 51; *Borggr. Vogelf. Norddeutschl.* p. 74 (1869).

Fringilla islandica, *Gray, Gen. B.* ii. p. 371 (1849).

Dryospiza serinus, *Cab. in Ersch u. Gruber, Encycl.* 1st sect. 50, p. 217 (1849); *Licht. Nomencl. Av. Berol.* p. 46 (1854).

Serinus orientalis, etc., *Brehm, Vogelf.* p. 92 (1855).

Fringilla (Dryospiza) serinus, *Heugl. Syst. Uebers.* p. 40 (1856).

Serinus hortulorum (lapsu), *Wyatt, Ibis*, 1867, p. 16; *Drake, t. c.* p. 427; *Smith, Ibis*, 1868, p. 445; *Gurney, Ibis*, 1871, p. 293.

Crithagra serinus, *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 647 (1870).

Serinus luteolus, *Homeyer, J. f. O.* 1873, p. 223.

Adult male. General colour above pale brown, broadly streaked with black down the centre of the feathers, which are washed with pale yellow; lower back and rump bright yellow; lesser wing-coverts uniform greenish yellow; median and greater coverts blackish, edged with yellow and tipped with yellowish white, forming a double wing-bar; bastard-wing, primary-coverts, and quills blackish, edged with pale yellow, the secondaries ashy whitish at the ends, the innermost resembling the greater coverts; upper tail-coverts brown, washed with yellow and whitish at the ends; tail-feathers dusky brown, edged with yellow; crown of head like the back, and streaked with blackish; the forehead and nape purer yellow; nasal plumes whitish; lores dusky; a narrow eyebrow and the feathers round eye yellow; ear-coverts ashy grey, washed with yellow and slightly streaked with dusky; cheeks ashy grey, with a pale yellow streak above them; throat and breast yellow, the lower throat ashy; sides of fore neck and of breast streaked with black; abdomen white; sides of body and flanks ashy brown, washed with yellow and broadly steaked with black; thighs and under tail-coverts white, the latter washed with yellow and streaked with blackish; under wing-coverts and axillaries ashy washed with yellow, the lower coverts white towards their ends; quills below dusky, ashy along the inner edge. Total length 4·5 inches, culmen 0·3, wing 2·8, tail 1·9, tarsus 0·55.

In summer the colours of the male are much more vivid, the grey

disappearing from the upper surface, which is consequently more yellow, and the frontal patch is much more distinct.

The *adult female* resembles the male, but is not so brightly coloured. Total length 4·5 inches, culmen 0·35, wing 2·6, tail 1·8, tarsus 0·5.

Young. Differs from the adult in being sandy brown above streaked with blackish, the rump mixed with whitish but not showing any yellow; wing-coverts, quills, and tail-feathers dusky, edged with pale sandy brown; under surface of body pale sulphur-yellow; the fore neck, breast, and sides of body streaked with black.

The female appears to be longer in gaining the adult plumage than the male, a specimen collected by Canon Tristram in Palestine having still the sandy-brown plumage of immaturity, though it possesses the yellow rump of the adult.

Hab. Central and Southern Europe, ranging eastwards to Asia Minor, Palestine, and Egypt; and northwards to Northern Germany, Denmark, and occasionally the British Islands.

a, b. ♂ ♀ ad. sk.	Valencia, Spain, Feb. 3, 1873 (*H. Saunders*).	Hume Coll.
c. Ad. sk.	Gibraltar, March 6, 1870 (*L. H. Irby*).	Hume Coll.
d. Ad. sk.	Tangier (*W. H. Drummond Hay*).	Gould Coll.
e, f. ♂ ad. sk.	Souza, Tunis, March 3, 1857 (*O. S.*).	Salvin-Godman Coll.
g. Juv. sk.	Tunis.	L. Fraser [C.].
h. ♂ ad. sk.	Asia Minor.	T. Robson [C.].
i. ♂ ad. sk.	Asia Minor, Dec. 10 (*T. Robson*).	Gould Coll.
k. ♂ ad. sk.	Sidon.	Canon Tristram [C.].
l. ♀ imm. sk.	Nahr-el-Kelb, Palestine.	Canon Tristram [C.].

Subsp. *a.* **Serinus canaria.**

Canary Birds, *Albin, Nat. Hist. B.* i. pl. 65 (1738).

Le Serin des Canaries, *Briss. Orn.* iii. p. 184 (1760); *Buff. Hist. Nat. Ois.* iv. p. 1 (1778).

Fringilla canaria, *Linn. Syst. Nat.* i. p. 321 (1766); *Webb et Berth. Orn. Canar.* p. 21, tab. 2 (1836–44); *Gray, Hand-l. B.* ii. p. 83, no. 7207 (1870).

Canary Finch, *Lath. Gen. Syn.* ii. pt. i. p. 293 (1783).

Carduelis canaria, *Less. Traité*, p. 443 (1831).

Crithagra canaria, *Swains. Classif. B.* ii. p. 294 (1837); *Gray, Gen. B.* ii. p. 385 (1849); *Blyth, Cat. B. Mus. As. Soc.* p. 124 (1849); *Melliss, Ibis*, 1870, p. 101.

Serinus canaria, *Cab. Mus. Hein.* Th. i. p. 163 (1850); *Bp. Consp.* i. p. 523 (1850); *Bolle, J. f. O.* 1858, p. 125, Taf. 1; *Godman, Azores*, p. 29 (1870); *id. Ibis*, 1872, p. 212; *Dresser, B. Eur.* iii. p. 557, pl. 172 (1877).

Serinus hortulanus (*nec Koch*), *Godman, Ibis*, 1866, p. 98.

Adult male. General colour above ashy brown, washed with yellow and streaked with blackish brown down the centre of the

feathers; rump uniform olive-yellow; lesser wing-coverts olive-yellow; median and greater coverts black, edged with yellow, the latter tipped with whitish; bastard-wing and primary-coverts black, margined with ashy yellow; quills dark brown, edged with ashy brown, tinged with yellow on the primaries; upper tail-coverts ashy brown washed with olive-yellow, with darker brown centres; tail-feathers dark brown, edged with ashy brown, tinged with yellow; crown of head olive-yellow, streaked with blackish centres to the feathers and slightly washed with ashy; forehead dull golden yellow, extending backwards over the eye; lores dusky yellow; eyelid and sides of face dull golden yellow, with a dusky streak across the lower ear-coverts; cheeks dull golden yellow, with a dusky malar stripe; throat and under surface of body dull golden yellow; the sides of the upper breast ashy grey; the sides of the body and flanks more ashy and streaked with black, more broadly on the latter; lower abdomen, thighs, and under tail-coverts whitish; under wing-coverts and axillaries pale ashy, washed with yellow; quills below dusky, ashy along the inner edge. Total length 4·55 inches, culmen 0·35, wing 2·75, tail 2·2, tarsus 1·65.

Adult female. Similar to the male, but a little browner, and having the yellow on the forehead, sides of face, and underparts less vivid. Total length 4·6 inches, culmen 0·4, wing 2·6, tail 2·1, tarsus 0·65.

In winter there is very little difference from the summer plumage, except that the general aspect of the birds is more ashy, most of the feathers being edged with the latter colour.

Nestling. Upper parts brownish grey, marked with indistinct blackish shaft-stripes; an indistinct ochreous grey stripe over the eye; sides of the head, neck, and upper breast ochreous grey, on the fore part of the face and throat tinged with pale yellow; lower breast pale yellowish, fading into white on the abdomen; flanks and crissum yellowish grey; rectrices blackish, on the underside broadly margined with greenish yellow, and on the upper with yellowish grey; wings crossed by two bars, the larger and smaller coverts being tipped with yellowish grey; quills blackish, edged with greenish grey; shoulders and some of the smaller wing-coverts pale yellowish green; iris blackish brown; bill horn-colour, the under mandible paler; legs blackish brown. The entire plumage is in general blurry in coloration, more so than in the colour of the Siskin. (*Dresser.*)

Obs. According to Dr. Bolle, the male in the first year after its birth wears a plumage closely resembling that of the female, and the full adult plumage, as described above, is not obtained until its second year.

Hab. Madeira, Canary Islands, and Azores.

a. Ad. sk.	Madeira.	C. Darwin, Esq. [P.].
b. Ad. sk.	Madeira.	Sharpe Coll.
c, *d*, *e.* Ad. sk.	Madeira (*F. G.*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Madeira, June 23, 1861 (*F.G.*).	Salvin-Godman Coll.
g, *h.* ♂ ad. sk.	Teneriffe, April 9, 1871 (*F. G.*).	Salvin-Godman Coll.

i, k. ♂ ad. ; *l.* ♀ ad. sk.	Teneriffe, April 28, 1871 (*F. G.*).	Salvin-Godman Coll.
m. ♂ ad. sk.	S. Michael's, Azores, March 1865 (*F. G.*).	Salvin-Godman Coll.
n, o. ♀ ad. sk.	S. Michael's, April 1865 (*F.G.*).	Salvin-Godman Coll.
p, q, r, s, t. Skeletons.		C. Darwin, Esq. [P.].

18. Serinus canonicus *.

? Serinus syriaca, *Bp. Consp.* i. p. 523 (1850).
? Dryospiza syriaca, *Licht. Nomencl. Av. Berol.* p. 46 (1854).
Serinus aurifrons (*nec Blyth*), *Tristr. P. Z. S.* 1864, p. 447 ; *id. Ibis*, 1867, p. 90 ; *id. Ibis*, 1868, p. 207, pl. 7.
Fringilla aurifrons, *Gray, Hand-l. B.* ii. p. 83, no. 7208 (1870).
Serinus canonicus, *Dresser, B. Eur.* iii. p. 558, pl. 171 (1876) ; *Tristr. Faun. & Flor. Palest.* p. 65, pl. ix. figs. 1, 2 (1884).

Adult male. General colour above ashy brown, washed with yellow and streaked with dusky-brown centres to the feathers of the mantle and back ; rump uniform bright yellow ; wing-coverts yellow, the greater coverts with blackish bases ; bastard-wing black, fringed with ashy whitish ; primary-coverts and quills black, edged with yellow and fringed with whitish at the tips, the blackish colour of the secondaries reaching to the outer web in the middle of these quills and forming a bar ; upper tail-coverts pale yellow, with dusky brown centres ; tail-feathers blackish brown, edged with yellow, the inner web edged with whity brown, which increases towards the outer feathers, so that the outermost is whity

* I have very little doubt that the oldest name of this species will be found to be *Serinus syriacus*, Bp. (ex Hempr. & Ehr. MSS.), as already suggested by Canon Tristram (Ibis, 1868, p. 207).

The following species is probably closely allied to, if not identical with, *S. canonicus* :—

Serinus pectoralis.

Serinus pectoralis, *Murray, Vert. Zool. Sind*, p. 190 (1884).

Male. A dark brown, nearly black streak at the base of the upper mandible, followed by a bright yellow frontal band, extending as a broad supercilium behind the ear-coverts; a slaty-grey streak through the eye ; crown of head slaty grey, each feather with a dark central streak ; nape greenish olive ; back, scapulars, and lesser wing-coverts yellowish green, the feathers with a dark mesial streak ; median coverts dark brown, edged with yellow ; greater coverts also dark brown, margined on their outer webs and tipped with yellow ; primaries and secondaries dusky brown, margined whitish on their inner webs, and edged on the outer very narrowly with greenish ; rump olivaceous ; upper tail-coverts yellowish, some of the lateral feathers with a dark mesial streak ; chin, throat, breast, and sides of the face bright golden yellow ; a dark brown, nearly black streak from each side of the base of the lower mandible extending to the sides of the neck, which is slaty grey ; sides of breast slaty grey, with a narrow band issuing from each side, nearly meeting on the lower breast, and forming a nearly complete pectoral band ; rest of under surface yellow ; tail dusky brown, the feathers slightly darker on their outer webs, and all tipped yellowish white on their inner webs ; bill horny ; legs dark fleshy ; irides light brown. (*A. Murray.*)

Hab. Karachi, Sind.

brown, excepting for the region of the shaft, which is brown, widening towards the tip; crown of head like the back, the forehead and sinciput golden yellow, extending back over the eye; lores, feathers round the eye, and fore part of cheeks golden yellow; ear-coverts and hinder cheeks ashy brown; sides of neck, throat, and under surface of body dull golden yellow; lower abdomen and thighs pale isabelline; sides of body and flanks rather more ashy, with faintly indicated dusky streaks; under tail-coverts isabelline white, slightly tinged with yellow; under wing-coverts and axillaries golden yellow; quills below dusky, ashy along the inner edge. Total length 5 inches, culmen 0·35, wing 3·05, tail 2·2, tarsus 0·55.

Adult female. Only differs from the male in being rather more ashy brown, and in having the yellow of the forehead and underparts less vivid. Total length 5 inches, culmen 0·4, wing 2·9, tail 2·1, tarsus 0·55.

Young of the year. Differs from the adult in having the yellow colour replaced by rich russet; and the golden-yellow forehead is also wanting. (*Dresser.*)

Hab. Syria and Palestine.

a, b. ♂ ♀ ad. sk.	Foot of Mount Hermon.	Canon Tristram [C.].
c. ♂ ad. sk.	Foot of Mount Hermon, June 3, 1864 (*H. B. Tristram*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Rukleh, Palestine, June 6, 1864 (*H. B. Tristram*).	Salvin-Godman Coll.

19. Serinus pusillus.

Passer pusillus, *Pall. Zoogr. Rosso-Asiat.* ii. p. 28, no. xliii. (1811).
Serinus pusillus, *Brandt, Bull. Sci. Acad. St. Pétersb.* i. p. 366 (1843); *Bp. Consp.* i. p. 524 (1850); *Dresser, Ibis*, 1875, p. 243; *id. B. Eur.* iii. p. 561, pl. 173 (1876); *Danf. Ibis*, 1878, p. 23; *Salvin, Cat. Strickl. Coll.* p. 215 (1882); *Seebohm, Ibis*, 1883, p. 9; *Tristr. Faun. & Flor. Palest.* p. 65 (1884).
Fringilla pusilla, *Gray, Gen. B.* ii. p. 372 (1849); *id. Hand-l. B.* ii. p. 82, no. 7200 (1870).
Fringilla rubrifrons, *A. Hay, J. A. S. Beng.* xv. p. 38 (1846).
Emberiza? aurifrons, *Blyth, J. A. S. Beng.* xvi. p. 476.
Serinus aurifrons, *Blyth, Cat. B. Mus. As. Soc.* p. 125 (1849).
Pyrrhula pusilla, *Degl. Orn. Eur.* i. p. 194 (1849).
Metoponia pusilla, *Bp. Notes Orn. Coll. Delattre*, p. 17 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 494 (1856); *Jerd. B. Ind.* ii. p. 410 (1863); *Blyth, Ibis*, 1867, p. 45; *Beavan, t. c.* p. 141; *id. Ibis*, 1869, p. 179; *Pelz. t. c.* p. 319; *Hume & Henders. Lahore to Yark.* p. 259 (1873); *Hume, Nests & Eggs Ind. B.* p. 473 (1873); *Stoliczka, Str. F.* 1874, p. 463; *Brooks, Str. F.* 1875, p. 255; *Blanf. East. Pers.* ii. p. 250 (1876); *Hume, Str. F.* 1879, p. 108; *Wardlaw Ramsay, Ibis*, 1880, p. 67; *Biddulph, Ibis*, 1881, p. 86; *Scully, t. c.* p. 578; *C. Swinh. Ibis*, 1882, p. 115; *Biddulph, t. c.* p. 284; *C. H. T. Marshall, Ibis*, 1884, p. 421; *Radde, Orn. Cauc* p. 175, pl. ix. figs. 6, 7 (1884).

Dryospiza pusilla, *Licht. Nomencl. Av. Berol.* p. 46 (1854).
Orægithus pusillus, *Cab. J. f. O.* 1854, p. xciv, pl. 1; *Severtz. Turkest. Jevotn.* pp. 64, 116 (1873); *Bogd. B. Cauc.* p. 64 (1879).

Adult male. General colour above streaked, the feathers black in the centre, with golden-yellow margins, the lower back more mealy, the rump-feathers yellow with black centres; lesser wing-coverts black, edged with golden yellow; median and greater coverts blackish, edged and tipped with ashy whitish, slightly tinged with yellow; bastard-wing and primary-coverts blackish, edged with ashy yellowish; quills dusky brown, edged with golden yellow, the secondaries margined with this colour near the base, and with whitish towards the end of the feathers, which are also fringed with whitish; upper tail-coverts black, rather broadly edged with ashy white; tail-feathers blackish, edged with whitish, tinged with golden yellow near the base; crown of head dusky blackish, the forehead crimson; nape, hind neck, and sides of neck like the back, but rather more narrowly streaked; lores and base of forehead dusky blackish; feathers round eye and sides of face, ear-coverts, cheeks, throat, and fore neck dusky blackish; under surface of body golden yellow, the breast mottled with black spots; abdomen ashy whitish; sides of body and flanks pale golden yellow, streaked with black; thighs and under tail-coverts golden yellow, the longer ones white, with black centres; under wing-coverts and axillaries golden yellow, with ashy bases; quills below dusky, ashy along the inner edge: "bill dull black, the base of the lower mandible slightly tinged with brown, gape whitish; iris so deep brown as to appear black" (*W. Davison*). Total length 4·8 inches, culmen 0·3, wing 2·95, tail 2·05, tarsus 0·6.

Adult female. Similar to the male, but not so brightly coloured, the frontal patch not so brilliant, and the golden yellow on the back and underparts paler. Total length 4·5 inches, culmen 0·3, wing 2·65, tail 1·9, tarsus 0·5.

With the advance of the breeding-season the plumage of the male becomes much darker, the yellow of the breast becoming abraded, so that the black overspreads the chest and flanks; the base of the secondaries becomes bleached and forms an alar speculum.

The *adult male in winter plumage* scarcely differs from the summer plumage, the light edges to the feathers being more marked, the golden yellow more intense on the wings and under surface of the body, and the dusky blackish on the sides of the face and throat somewhat obscured by ashy margins, the hinder crown overshaded with ashy grey, and the nape uniform ashy; inner secondaries broadly edged with sandy brown.

Young (Ronda district, September 20, 1879). Differs from the adult in wanting the red forehead. The general colour of the upper surface is pale sandy brown, streaked with black, the head like the back and streaked with dusky blackish; the rump and upper tail-coverts less distinctly streaked; lesser wing-coverts like the back; median and greater series blackish, edged with paler sandy brown, the secondaries similarly coloured, the primaries

edged with golden yellow and the secondaries also at the base; tail-feathers blackish, edged with sandy brown and with golden yellow near the base; base of forehead pale sandy buff; sides of face and ear-coverts dark brown; sides of neck sandy brown; throat and fore neck clear sandy brown, with a slight yellow tinge on the throat; breast and sides of body sandy brown, streaked with black; abdomen and under tail-coverts paler, the latter centred with dusky blackish.

In winter plumage the young males and females resemble the adults and have the same distribution of golden yellow over the body, but the crown and ear-coverts are brown, and the inner secondaries are edged with brown.

The young males appear to have a more uniform brown head than the young females, which have the head streaked with blackish, and the throat is generally browner in the females, blacker in the young males. As, however, both sexes ultimately resemble each other, it is probable that these changes merely indicate that the males acquire the full plumage rather more quickly than the females. Out of the large series collected near Simla, in the Hume Collection, many are already moulting in December and are acquiring the red forehead. One specimen from Gilgit presented to the Museum by Dr. Scully is getting this as early as the 10th of October.

Hab. From the Caucasus and Northern Persia to Turkestan, wintering to the southward in Asia Minor, as far as the Lebanon, and in the North-western Himalayas.

a, b. ♂ ♀ ad. sk.	Giaur Keuy, Taurus, Asia Minor, April 27, 1876 (*C. G. Danford*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Karij Valley, Elburz Mountains, Aug. 9, 1872.	W. T. Blanford, Esq. [C.].
d, e. Ad. sk.	Kandahar.	Capt. Hutton [P.].
f. ♀ ad. sk.	Kandahar, April 10, 1881.	Col. Swinhoe [P.].
g, h. Ad. sk.	Pushut, Afghanistan (*Dr. Griffith*).	India Museum.
i. Juv.; *k, l.* ♂ ♀ ad. sk.	Wakhan, Kashgar, April 24, 1874 (*J. Biddulph*).	Hume Coll.
m, n. ♂ ♀ ad. sk.	Panja, April 13, 1874 (*J. Biddulph*).	Hume Coll.
o, p. Ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
q. ♀ ad. sk.	Ladak, Aug. 18, 1873.	Hume Coll.
r. ♀ ad. sk.	Dras, Oct. 11, 1879 (*J. Biddulph*).	Hume Coll.
s. ♀ ad. sk.	Baltistan, May 28, 1876 (*J. Biddulph*).	Hume Coll.
t. ♂ ad. sk.	Gilgit, May 20, 1872 (*J. Biddulph*).	Hume Coll.
u. ♂ ad. sk.	Gilgit, Feb. 17, 1878 (*J. Biddulph*).	Hume Coll.
v. ♂ juv. sk.	Astor district, Sept. 1876 (*J. Biddulph*).	Hume Coll.
w. Ad. sk.	Gilgit, Oct. 9, 1880.	Dr. J. Scully [P.].
x, y. ♂ ♀ ad. sk.	Shupyun, Cashmere, May 15, 1871 (*W. E. Brooks*).	Hume Coll.

z. Ad. sk.	Cashmere (*Dr. Bellew*).	India Museum.
a', *b'*. Ad. sk.	Murdan, March 1871.	Hume Coll.
c'. Ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
d'. Ad. sk.	Simla, March 16, 1881.	Hume Coll.
e'–*l'*. ♂ ad. ; *m'*, *n'*. ♂ juv. ; *o'*–*v'*. ♀ juv. sk.	Simla, December 1880 (*W. Davison*).	Hume Coll.
w', *x'*, *y'*, *z'*, *a*. ♀ imm. sk.	Kotegurh, December 1870 *.	Hume Coll.
β. ♂ ; *γ*, *δ*. ♀ ad. sk.	Kotegurh, April 1871.	Hume Coll.
ε, *ζ*. ♂ ad. ; *η*, *θ*, *ι*. ♀ ad. sk.	Koomarsain, Nov. 1, 1869.	Hume Coll.
κ, *λ*. ♂ ♀ ad. sk.	Kotekhaie, Feb. 28, 1871 *.	Hume Coll.
μ. ♀ juv. sk.	Ronda district, Sept. 20, 1879.	Hume Coll.
ν, *ξ*. Ad. sk.	Middle range of hills, north of Masuri.	Hume Coll.

42. SYCALIS.

	Type.
Sicalis, *Boie*, *Isis*, 1828, p. 324	Typo haud indicato.
Sycalis, *Cab. in Tschudi's Faun. Peruan.* p. 215 (1845–46, *ex Boie*)	S. flaveola.
Gnathospiza †, *Tacz. P. Z. S.* 1877, p. 320	S. taczanowskii.

Range. Confined to Central and South America.

Key to the Species.

a. Inner edge of quills yellow below or yellowish white.
  a'. Flanks uniform, not streaked with blackish ; forehead and vertex entirely orange.
    a''. Larger : wing 2·6–3 inches ; inner edge of quills yellow, very broad ..... *flaveola* ♂, p. 377. / *jamaicæ* ♂, p. 379.
    b''. Smaller : wing 2·2–2·3 inches ; inner edge of quills yellowish white ..... *colombiana* ♂, p. 380.
  b'. Flanks streaked with blackish or dusky.
    c''. Underneath entirely yellow ..... *pelzelni* ♂, p. 380.
    d''. Abdomen whitish, as also the throat.
      a'''. A broad band of yellow across the fore neck and chest ..... *flaveola* ♀ ad., p. 378.
      b'''. Chest whitish, streaked with brown, like the flanks ..... *pelzelni* ♀ ad., 381.
b. Inner edge of quills ashy or whitish below.
  c'. Underneath yellow ; greyish on the breast ; flanks not streaked ..... *arvensis* and allies, pp. 382–384.
  d'. Underneath white, yellow on the chin only ; flanks ashy brown, streaked with dusky brown ..... *taczanowskii*, p. 385.

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* Mr. Dresser has given the name of Dr. Henderson as the collector of some specimens from these localities. Dr. Henderson never was in this part of the Himalayas, and the specimens were obtained by Mr. Hume's collector.

† Seems to me to be only a thick-billed *Sycalis*.

1. Sycalis flaveola.

Le Bruant de Brésil, *Briss. Orn.* iii. p. 299 (1760); *Daubent. Pl. Enl.* v. pl. 321. fig. 1 *.

Fringilla flaveola, *Linn. Syst. Nat.* i. p. 321 (1766); *Gray, Hand-l. B.* ii. p. 84, no. 7228 (1870).

Fringilla flava, *P. L. S. Müll. Syst. Nat. Suppl.* p. 164 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 254; *Gray, Hand-l. B.* ii. p. 84, no. 7223 (1870).

Le Guirnegat, *Montb. Hist. Nat. Ois.* iv. p. 361 (1778).

Brazilian Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 197 (1783).

Emberiza brasiliensis, *Gm. Syst. Nat.* i. p. 872 (1781); *Lafr. & D'Orb. Rev. et Mag. de Zool.* 1837, p. 73.

Fringilla brasiliensis, *Spix, Av. Bras.* ii. p. 47, pl. 61. figs. 1, 2 (1825); *Neuwied, Beitr. Orn. Brasil.* iii. p. 614 (1830); *Gray, Gen. B.* ii. p. 372 (1849).

Crithagra brasiliensis, *Bp. Consp.* i. p. 521 (1850).

Sycalis brasiliensis, *Cab. & Tsch. Faun. Peruan.* p. 215 (1845–46); *Cab. in Schomb. Reis. Guian.* iii. p. 679; *id. Mus. Hein.* Th. i. p. 146 (1850); *Burm. Th. Bras.* iii. p. 253 (1856); *E. C. Taylor, Ibis*, 1864, p. 83; *Wyatt, Ibis*, 1871, p. 328.

Sycalis aureipectus, *Bp. C. R.* xxxvii. p. 917 (1855); *Sclater, P. Z. S.* 1855, p. 159; *id. Cat. Amer. B.* p. 126 (1862).

Sycalis flaveola, *Pelz. Orn. Bras.* p. 231 (1871); *Sclater, Ibis*, 1872, p. 41; *id. & Salvin, Nomencl. Av. Neotr.* p. 34 (1873); *Tacz. P. Z. S.* 1877, p. 322, 1879, p. 244, 1880, p. 199; *Scl. & Salv. P. Z. S.* 1879, p. 607; *Salv. & Godm. Ibis*, 1880, p. 123; *W. A. Forbes, Ibis*, 1881, p. 238; *Salv. Cat. Strickl. Coll.* p. 215 (1882); *Berlepsch & Tacz. P. Z. S.* 1883, p. 552; *Salvin, Ibis*, 1885, p. 217; *Tacz. Orn. Pérou*, iii. p. 55 (1886).

Adult male. General colour above bright olive-yellow, with dusky mesial streaks on the feathers of the mantle and upper back, the lower back and rump more uniform and slightly brighter yellow, the long upper tail-coverts more dingy yellow; lesser and median coverts uniform bright olive-yellow; greater coverts dusky blackish, externally yellow, more brilliant on the margins; bastard-wing, primary-coverts, and quills dusky blackish, edged with bright yellow, broader and more olive-yellow on the inner secondaries; tail-feathers dusky blackish, edged with bright yellow externally, and with pale yellow along the inner web; crown of head and hind neck uniform bright olive-yellow, the forehead and vertex bright orange; sides of hinder crown, lores, sides of face, and entire under surface of body bright yellow, tinged with orange on the sides of the face, throat, and fore neck; sides of body and flanks slightly washed with olive; thighs, under tail-coverts, under wing-coverts, and axillaries bright yellow; quills below dusky, with a broad yellow margin along the inner webs: "upper mandible horn-brown, the lower one pale whitish horn-colour; feet fleshy brown; iris greyish brown" (*Neuwied*). Total length 5·3 inches, culmen 0·45, wing 2·8, tail 1·85, tarsus 0·75.

* A bad figure, apparently intended for a Weaver-bird of some kind.

Adult female. Different from the male. General colour above pale greenish yellow, more ashy on the mantle and upper back, the feathers of which are brown in the centre, with a blackish shaft-streak; lower back, rump, and upper tail-coverts uniform greenish yellow, the latter somewhat dusky in the centres; lesser wing-coverts yellow; median and greater coverts dusky brown, edged with yellow, whitish towards the ends; bastard-wing, primary-coverts, and quills dusky brown, margined with yellow, brighter on the latter, the inner secondaries edged with whity brown; tail-feathers dusky brown, edged with yellow; crown of head yellow, washed with ashy, the feathers having dusky shaft-lines and having a concealed orange shade on the forehead; lores and sides of face ashy, as well as the cheeks and throat, the latter slightly washed with yellow; lower throat, fore neck, and chest yellow, forming a broad band; remainder of under surface of body ashy whitish, slightly streaked with dusky on the sides: the sides of the body and flanks, thighs, under wing-coverts, and axillaries yellow; under tail-coverts whitish, washed with yellow; quills dusky below, broadly edged with yellow along the inner web. Total length 5·3 inches, culmen 0·45, wing 2·9, tail 2, tarsus 0·75.

According to the identification of Mr. Jelski the *adult female* becomes like the male, but is a little paler yellow below, with not such a rich orange crown.

Peruvian birds are the largest, and have the wing 3–3·15 inches in length. In specimens from other localities it varies from 2·75–2·95 inches.

A seasonal or winter plumage appears to take place in this species, when the whole upper surface is shaded with ashy and the mesial streaks on the back are more distinct. The yellow of the face and underparts is also overshaded with ashy, and the flanks are rather distinctly striped with dusky brown. In full plumage there is no sign of any streaks on the flanks, and this character may be due to hybridization with *S. pelzelni*.

Young males apparently resemble the adult females at first, but are more coarsely striped above, especially on the head; there is also more yellow on the throat, and the upper parts and wings are browner.

Hab. From Southern Brazil to Bolivia, Peru and Ecuador, Colombia, Guiana and Venezuela.

a. Ad. st.	Brazil.	A. Murray, Esq. [P.].
b. Imm. sk.	Brazil.	Christiania Museum [P.].
c, d. ♂ ♀ ad. sk.	Brazil.	Sclater Coll.
e. Imm. sk.	Brazil.	Salvin-Godman Coll.
f. Imm. sk.	Rio de Janeiro.	Sclater Coll.
g. Ad. sk.	Rio de Janeiro.	Salvin-Godman Coll.
h, i. ♂ ad. sk.	Santa Fé, Minas Geraes (*H. Rogers*).	Sclater Coll.
k. ♂ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.

l. ♂ ad. sk.	San Paulo (*Joyner*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Ypanema, Oct. 31, 1819 (*J. Natterer*).	Sclater Coll.
n. ♂ ad. sk.	Sapitiba, Feb. 9, 1818 (*J. Natterer*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Rio Claro, Prov. Goiaz, Brazil (*Joyner*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Bahia (*Dr. Wucherer*).	Salvin-Godman Coll.
q ♂ ad. st.	Para.	R. Graham, Esq. [P.].
r. Ad.; *s.* Imm. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Valencia, Venezuela (*A. Goering*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Santa Marta, U. S. Colombia, April 2, 1879 (*F. A. Simons*).	Salvin-Godman Coll.
v. ♀ imm. sk.	Santa Marta (*C. W. Wyatt*).	Sclater Coll.
w. ♀ ad. sk.	Bogota.	Purchased.
x. ♂ imm. sk.	Bogota.	Sclater Coll.
y. Ad.; *z.* ♀ ad. sk.	Tumbez, Peru (*Jelski*).	Sclater Coll.
a', *b'*. Skeletons.		Purchased.

Subsp. *a.* **Sycalis jamaicæ.**

Crithagra brasiliensis, *Gosse, B. Jamaica*, p. 245, pl. 61 (1847, *nec Gm.*).

Sycalis brasiliensis, *Sclater, P. Z. S.* 1861, p. 74.

Adult male. Similar to *S. flaveola*, but brighter and more uniform yellow above, with the bright orange of the crown continued to the nape: "upper mandible blackish, lower one horny; feet horn-colour; iris dark hazel" (*Gosse*). Total length 4·7 inches, culmen 0·4, wing 2·6, tail 1·8, tarsus 0·65.

Three males from Jamaica agree in the above characters. They have the wing 2·9–3 inches.

Hab. Jamaica.

a. Ad. sk.	Jamaica.	Purchased.
b. Ad.; *c.* Imm. sk.	Jamaica.	P. H. Gosse, Esq. [C.].
d. ♂ ad. sk.	Jamaica (*Osburn*).	Sclater Coll.
e, *f.* Skeletons.	Jamaica.	P. H. Gosse, Esq. [C.].

2. Sycalis colombiana *.

Sycalis columbiana, *Cab. Mus. Hein.* Th. i. p. 147 (1850); *Scl. Cat. Amer. B.* p. 126 (1862); *Pelz. Orn. Bras.* p. 231 (1871); *Scl. Ibis*, 1872, p. 43; *id. & Salv. Nomencl. Av. Neotr.* p. 35 (1873); *Salv. Cat. Strickl. Coll.* p. 216 (1882); *Berlepsch, Ibis*, 1884, p. 433.

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* The oldest name for this species is probably *Sycalis luteola* (Sparrm.). The original specimen figured by Sparrmann is in the Stockholm Museum. Sundevall says that the same species is in that museum from Caraccas, and that it is identical with *C. minor* of Cabanis. There must be some error here, as Sundevall speaks of it as being a small form of *C. flaveola*, whereas *C. minor* belongs to the *C. arvensis* group. It is better to drop the name of *luteola* altogether, and accept those around which no uncertainty hangs. The synonymy of Sparrmann's bird is as follows:—

Emberiza luteola, *Sparrm. Mus. Carls.* ii. pl. 93 (1789).

Sycalis luteola, *Sundev. Krit. om Sparrm. Mus. Carls.* p. 14 (1857).

Sycalis brasiliensis (*nec Gm.*), *Scl. & Salv. P. Z. S.* 1867, p. 573.
Fringilla columbiana, *Gray, Hand-l. B.* ii. p. 84, no. 7232 (1870).

Adult male. Similar to *S. flaveola*, but smaller in size, with the back uniform olive-yellow, and the quill-lining narrower and pale sulphur-yellow or yellowish white. Total length 4·3 inches, culmen 0·45, wing 2·2, tail 1·5, tarsus 0·6.

Two other males have the wings 2·4 inches.

Female. Unknown.

Young male after the first moult. Not so bright yellow as the adult and greener; the head only slightly more yellow than the back and without any orange; underneath paler yellow, with the centre of the breast and abdomen white. Wing 2·2–2·3 inches.

Hab. Venezuela, probably Trinidad, extending into Amazonia.

a. Ad. sk.	Venezuela.	Sclater Coll.
b. Ad. sk.	[Trinidad.]	Sclater Coll.
c. ♂ ad.; *d.* ♂ juv. sk.	Barra do Rio Negro, April 1833 (*J. Natterer*).	Sclater Coll.
e. ♂ juv. sk.	Barra do Rio Negro, April 1833 (*J. Natterer*).	Salvin-Godman Coll.

3. Sycalis pelzelni.

Chúy, *Azara, Apunt.* i. p. 479 (1802).
Passerina flava, *Bonn. et Vieill. Enc. Méth.* iii. p. 932 (1823, pt.).
Crithagra brasiliensis (*nec Gm.*), *Darwin, Voy. 'Beagle,' Birds*, p. 88 (1841).
Passerina brasiliensis (*nec Gm.*), *Hartl. Ind. Azara*, p. 9 (1847).
? Crithagra flaveola, *Bp. Consp.* i. p. 521 (1858).
Sycalis chloropsis, *Scl. & Salv. P. Z. S.* 1869, pp. 161, 632 (*nec Bp.*).
Sycalis brasiliensis (*nec Gm.*), *Pelz. Orn. Bras.* p. 232 (1871).
Sycalis pelzelni, *Sclater, Ibis*, 1872, p. 42; *id. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Durnf. Ibis*, 1877, p. 172; *Salv. Cat. Strickl. Coll.* p. 215 (1882); *Berlepsch & Ihering, in Madarász, Zeitschr. ges. Orn.* ii. p. 125 (1885); *Gibson, Ibis*, 1885, p. 278.
Sycalis flaveola (*nec L.*), *Berlepsch, J. f. O.* 1873, p. 247; *White, P. Z. S.* 1882, p. 600.
Sycalis intermedia, *Cab. J. f. O.* 1883, p. 216.

Adult male (type of species). General colour above yellow, the feathers of the hind neck, mantle, and back mesially streaked with blackish; lower back and rump uniform yellow, shaded with dull ashy grey; lesser and median coverts like the back; greater coverts also yellow, with blackish shaft-lines; bastard-wing, primary-coverts, and quills dusky brown, edged with yellow, rather brighter on the primaries; upper tail-coverts like the back, but with dusky brown centres; tail-feathers dusky brown, edged with yellow externally; crown of head brighter yellow than the back, the forehead deep orange; lores bright yellow, as well as the feathers round the eye; ear-coverts yellow, a little duller posteriorly; cheeks and under surface of body bright yellow, duller on the sides of the body and flanks, the latter with distinct dusky blackish streaks; thighs and under tail-coverts bright yellow, as also the under wing-coverts

and axillaries; quills below dusky, yellow along the inner edge: bill dark horn-colour: "legs and feet yellowish brown" (*H. Durnford*). Total length 5·1 inches, culmen 0·4, wing 2·9, tail 2, tarsus 0·65.

Adult female. Different from the male. General colour above brown, slightly tinged with yellow, all the feathers mesially streaked with blackish brown; lower back and rump uniform brown, washed with ashy olive; lesser wing-coverts brown, edged with ashy and washed with olive-yellow, the median and greater series edged with whity brown; bastard-wing, primary-coverts, and quills dusky brown, edged with yellow, brighter on the quills, the inner secondaries edged with whitish; upper tail-coverts ashy brown, with dusky centres; tail-feathers dark brown, edged with yellow, whitish towards the ends of the feathers; crown of head brown, streaked with blackish brown; lores and feathers round the eye whitish; sides of face dull white, streaked with brown, the ear-coverts browner; throat white; remainder of under surface ashy white, streaked with brown on the fore neck, breast, sides of body, and flanks, the latter pale reddish brown with a slight tinge of yellow; abdomen, thighs, and under tail-coverts uniform ashy whitish; axillaries yellow; under wing-coverts ashy whitish, tinged with yellow; quills dusky below, yellow along the inner web: "bill horn-brown, the lower mandible paler; legs and feet slate-colour; iris wood-brown" (*H. Durnford*). Total length 4·8 inches, culmen 0·35, wing 2·55, tail 1·8, tarsus 0·65.

Young male. Resembles the adult female but is rather more ashy, especially below, where the streaks are smaller and less distinct.

Hab. Brazil and Argentine Republic to Bolivia.

a. ♂ ad. sk.	Para.	R. Graham, Esq. [P.].
b. ♂ ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
c, d. ♂ ad. sk.	Brazil.	M. Claussen [P.].
e. ♀ ad. sk.	Rio de Janeiro.	Sclater Coll.
f. ♂ juv. sk.	La Plata.	Sclater Coll.
g. ♂ ad. sk.	Buenos Ayres.	Sclater Coll. (Type of *S. pelzelni.*)
h, i. ♂ ♀ ad. sk.	Buenos Ayres (*Haslehurst*).	Salvin-Godman Coll.
k. ♂ juv. sk.	Conchitas (*Hudson*).	Sclater Coll.
l. ♀ ad. sk.	Punta Lara, Oct. 17, 1875.	H. Durnford, Esq.
m, n. ♂ ♀ ad. sk.	Belgrano, April 5, 1876.	H. Durnford, Esq.
o. ♂ ad. sk.	Belgrano, Mar. 27, 1876.	H. Durnford, Esq.
p. ♀ ad. sk.	Salta, June 19, 1878.	H. Durnford, Esq.
q. ♀ ad. sk.	Cuyaba (*Natterer*).	Sclater Coll.
r. ♂ ad. sk.	Catamarca, Arg. Rep., Sept. 13, 1880 (*E. W. White*).	Sclater Coll.
s. ♀ ad. sk.	Catamarca, Arg. Rep., Aug. 7, 1880 (*E. W. White*).	Sclater Coll.
t. ♂ ad. sk.	Cordova (*Schuelz*).	Sclater Coll.
u. Juv. sk.	Bolivia.	Mr. Bridges [C.].

4. Sycalis arvensis.

Chipiu, *Azara, Apunt.* i. p. 475 (1802); *Hartl. Ind. Azara*, p. 9 (1847).
Fringilla arvensis, *Kittl. Mém. prés. Acad. St. Pétersb.* ii. p. 134, tab. 4 (1835).
Crithagra? brevirostris. *Gould, Voy. 'Beagle,' Birds*, p. 88 (1841).
Fringilla brevirostris, *Gray, Gen. B.* ii. p. 372 (1849).
Fringilla arvensis, *Gray, Gen. B.* ii. p. 372 (1849); *id. Hand-l. B.* ii. p. 84, no. 7229 (1870).
Sycalis luteiventris (*nec Meyen*), *Burm. La Plata Reis.* ii. p. 489 (1861); *Durnf. Ibis*, 1877, p. 33; *Taczan. Orn. Pérou*, iii. p. 59 (1886).
Sycalis arvensis, *Scl. & Salv. P. Z. S.* 1868, p. 140; *White, P. Z. S.* 1883, p. 433.
Crithagra brevirostris, *Philippi & Landb. Cat. Aves Chili*, p. 25.
Sycalis luteola (*nec Sparrm.*), *Scl. Ibis*, 1872, p. 25 (pt.); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873, pt.); *Durnford, Ibis*, 1877, p. 172, 1878, p. 394; *Scl. & Salv. P. Z. S.* 1879, p. 607; *Salv. Cat. Strickl. Coll.* p. 216 (1882); *id. P. Z. S.* 1883, p. 422; *Gibson, Ibis*, 1885, p. 278.

Adult male. General colour above brown, washed with olive-yellow, the feathers of the mantle and upper back edged with ashy; and broadly centred with blackish brown; lower back and rump olive-greenish, washed with ashy; lesser wing-coverts olive-yellow; median and greater coverts, bastard-wing, and primary-coverts dark brown, edged with whity brown; quills dark brown, edged with whity brown, and with dull olive-yellow near the base; upper tail-coverts brown, edged with ashy; tail-feathers dark brown, edged with whity brown, and fringed with whitish along the inner web; crown of head and hind neck dull olive-yellow, shaded with ashy, the head distinctly streaked with blackish-brown centres to the feathers; base of forehead brighter yellow; lores and feathers below the eye pale yellow, surmounted by a streak of bright golden yellow; ear-coverts brown, washed with olive-yellow; cheeks, throat, and under surface of body bright yellow, shaded with ashy on the fore neck and breast; abdomen rather brighter yellow; sides of the body and flanks shaded with ashy-brown ends to the feathers; thighs ashy whitish; under tail-coverts yellow, the long ones white at the ends; under wing-coverts and axillaries yellow; quills below dusky, ashy whitish along the edge of the inner web. Total length 5·2 inches, culmen 0·4, wing 3, tail 2·1, tarsus 0·6.

All the males in the British Museum appear to me to be *in seasonal or winter plumage*, or else the ashy shade which pervades the general aspect of the bird is an additional specific character distinguishing it from its smaller and brighter tropical relatives.

The *adult female* is browner than the male, with less yellow on the back, the lower back and rump greenish, overshaded with ashy; the wing-coverts and quills externally brown: the lores and the eyebrow are very faintly represented by a slight yellowish shade, and the yellow on the under surface is altogether paler, and more

saffron-yellow on the cheeks and throat. Total length 5·5 inches, culmen 0·4, wing 2·85, tail 2·1, tarsus 0·65.

Young. Similar to the old female but more mottled, the whole of the upper surface, including the lower back and rump, being broadly streaked with blackish centres to the feathers; wing-coverts and quills edged with white or yellowish white, the secondaries externally brown; lores, eyebrow, cheeks, and throat whiter than in the old female; breast and abdomen pale yellow, the fore neck and breast thickly streaked with dark-brown centres to the feathers, the flanks less distinctly striped.

In its first winter plumage the young bird closely resembles the adult female, but is more distinctly streaked above, and is paler below, with tiny brown streaks on the fore neck and chest.

Hab. Southern Brazil, Argentine Republic, Bolivia, and Chili to Southern Peru.

a. Ad. sk.	Brazil.	Purchased.
b. ♂ ad. sk.	Conchitas, Buenos Ayres, Oct. 1866 (*W. H. Hudson*).	Sclater Coll.
c. Ad.; *d.* Imm. sk.	Buenos Ayres, Nov. 5, 1876.	H. Durnford, Esq. [P.].
e. Ad. sk.	Buenos Ayres, May 20, 1876.	H. Durnford, Esq. [P.].
f. ♀ ad. sk.	Uruguay, Aug. 1877.	Alan Peel, Esq. [C.].
g, h. ♂ ♀ ad. sk.	Matogrosso, July 22, 1825 (*J. Natterer*).	Sclater Coll.
i. Ad. sk.	Bolivia.	W. Bridges, Esq. [C.].
k, l. Ad. sk.	Tilotilo, Prov. Yungas, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
m, n. Ad. sk.	Mendoza (*Burmeister*).	Salvin-Godman Coll.
o. Ad. sk.	Chili.	Sclater Coll.
p. Juv. sk.	Chili (*Philippi*).	Sclater Coll.
q, r. ♂ ♀ ad. sk.	Prov. Santiago, Chili (*Landbeck*).	Sclater Coll.
s. ♀ ad. sk.	Prov. Santiago, Chili (*Landbeck*).	Salvin-Godman Coll.
t. ♀ juv. sk.	Coquimbo, Chili, Nov. 1881 (*A. H. Markham*).	Salvin-Godman Coll.
u. Ad. sk.	Talcahuano, Chili (*A. H. Markham*).	Salvin-Godman Coll.

Subsp. *a.* **Sycalis luteiventris.**

Fringilla luteiventris, *Meyen, N. Acta Acad. Leop.* xvi. Suppl. p. 87, pl. 12. fig. 3 (1834); *Gray, Gen. B.* ii. p. 372 (1849); *id. Hand-l. B.* ii. p. 84, no. 7230 (1870).

Crithagra luteiventris, *Bp. Consp.* i. p. 521 (1850).

Sycalis arvensis (*nec Kittl.*), *Sclater, Cat. Amer. B.* p. 126; *id. P. Z. S.* 1867, p. 323; *Tacz. Orn. Pérou*, iii. p. 61 (1886).

Sycalis luteiventris, *Scl. P. Z. S.* 1867, p. 342; *id. & Salv. P. Z. S.* 1869, p. 599.

Sycalis luteola (*nec Sparrm.*), *Berlepsch & Tacz. P. Z. S.* 1884, p. 294; *Tacz. & Berlepsch, P. Z. S.* 1885, p. 85.

Sycalis raimondi, *Tacz. P. Z. S.* 1874, p. 522.

Adult male. Similar to *S. minor*, and of small size and bright

coloration, but having the outer tail-feather obliquely marked with white. Total length 4·7 inches, culmen 0·35, wing 2·75, tail 1·85, tarsus 0·55.

The length of wing in this subspecies varies from 2·7 to 2·85 inches.

Hab. Peru, Ecuador, and Colombia.

a. Ad. sk.	Lima, Peru (*W. Nation*).	Sclater Coll.
b. ♂ ad. sk.	Arequipa, Peru, Feb. 20, 1868 (*H. Whitely*).	Sclater Coll.
c, d. Ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Cuenca, Ecuador, Nov. 1867 (*L. Fraser*).	Sclater Coll.
f, g, h. Ad. sk.	Bogota.	Sclater Coll.
k. Ad. sk.	Bogota (*G. Crowther*).	Salvin-Godman Coll.

Subsp. β. Sycalis minor.

Sycalis minor, *Cab. in Schomb. Reis. Guian.* iii. p. 679 (1848); *Pelz. Orn. Bras.* p. 232 (1871); *Salv. Ibis*, 1885, p. 217.
Crithagra hilarii, *Bp. Consp.* i. p. 521 (1850).
Sycalis hilarii, *Cab. Mus. Hein.* Th. i. p. 147 (1850); *Burm. Th. Bras.* iii. p. 254 (1856); *Scl. Cat. Amer. B.* p. 126 (1862); *id. & Salv. P. Z. S.* 1867, p. 573; *Pelz. Orn. Bras.* p. 232 (1871).
Fringilla hilarii, *Gray, Hand-l. B.* ii. p. 84, no. 7232 (1870).

Adult male. Similar to *S. arvensis*, but smaller and brighter yellow below; ear-coverts and sides of neck brighter olive-yellow, the latter much more brilliant than in *S. luteiventris*. Total length 4·6 inches, culmen 0·4, wing 2·5, tail 1·6, tarsus 0·6.

Adult female. Similar to the male, but browner and greener on the rump. Total length 4·6 inches, culmen 0·4, wing 2·55, tail 1·7, tarsus 0·55.

Hab. Amazonia, Venezuela, and Guiana.

a. ♂ ad. sk.	Island of Mexiana, Lower Amazons, Dec. 1848 (*A. R. Wallace*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Island of Mexiana (*A. R. W.*).	Sclater Coll.
c. ♂ ad. sk.	Caraccas, Venezuela.	Sclater Coll.

Subsp. γ. Sycalis chrysops.

Sycalis chrysops, *Sclater, P. Z. S.* 1861, p. 376; *Salv. Ibis*, 1866, p. 194; *Scl. Ibis*, 1872, p. 45, pl. ii. fig. 1; *id. & Salv. Nomencl. Av. Neotr.* p. 35 (1873); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 433 (1886).
Fringilla chrysops, *Gray, Hand-l. B.* ii. p. 84, no. 7237 (1870).

Adult male (type of species). Very similar to *S. arvensis*, but without any white on the outer tail-feather, which resembles that of the true *S. arvensis*. Total length 4 inches, culmen 0·35, wing 2·55, tail 1·7, tarsus 0·6.

Hab. Central America, from Mexico to Guatemala.

a. ♂ ad. sk.	Mexico.	Sclater Coll. (Type of species.)
b. Imm. sk.	Dueñas, Guatemala, Sept. 1862 (*O. S.*).	Salvin-Godman Coll.

5. Sycalis taczanowskii *.

Gnathospiza raimondi, *Tacz. P. Z. S.* 1877, pp. 320, 750, pl. xxxvi. fig. 1 ; *id. Orn. Pérou*, iii. p. 6 (1886).
Gyrhinorhynchus flavomentum (?), *Gray, Hand-l. B.* ii. p. 107, no. 7628 (1870, *nomen nudum*).

Adult male. General colour above brown, with blackish-brown centres to the feathers of the mantle and back, which are also washed with ashy ; rump uniform ashy brown ; wing-coverts brown, darker in the centre and edged with rufous ; bastard-wing, primary-coverts, and quills dark brown, edged with whity brown, the primaries edged with olive-yellow, the inner secondaries with rufous like the greater coverts ; upper tail-coverts dusky brown, edged with yellow ; tail-feathers blackish, edged with whity brown, with a good deal of yellow towards the base ; crown of head like the back and similarly mottled with dark centres to the feathers, the head washed also with yellow, more distinctly on the sides of the crown ; lores and feathers round the eye yellow ; eyelid whitish ; ear-coverts and cheeks ashy brown, washed with yellow ; cheeks ashy whitish, the chin yellow ; sides of neck ashy brown ; fore neck with a yellow patch ; remainder of under surface white, with a faint tinge of yellow ; sides of body and flanks light brown, the latter narrowly streaked with dark brown ; thighs ashy whitish ; under tail-coverts yellow, ashy whitish at the ends ; under wing-coverts ashy whitish, the edge of the wing mottled with dark bases, and washed with yellow ; axillaries yellow, with ashy-whitish bases ; quills below dusky, isabelline along the inner edge. Total length 5 inches, culmen 0·45, wing 2·65, tail 1·7, tarsus 0·7.

Two specimens, collected by Capt. Kellett and Lieut. Wood, are greyer than the bird described, and the margins to the wing-coverts and quills are whitish and not rufous. The under surface of the body is whiter, and there is no yellow on the fore neck.

Hab. Peru and Ecuador.

a. ♂ ad. sk.	Tumbez, Peru (*Jelski*).	Sclater Coll.
b, *c*. Ad. sk.	St. Elena Bay.	Capt. Kellett and Lieut. Wood [P.].

* As already stated, I regard this species as nothing more than a thick-billed *Sycalis*, and its name should therefore be *Sycalis raimondi* (Tacz.) ; but as Dr. Taczanowski has already bestowed this name on the Peruvian *S. luteiventris*, I propose to call the species after the original describer, whose standard work on the Ornithology of Peru has been of such assistance to myself and all students of South-American ornithology. The locality "N.W. coast of America," assigned by the late G. R. Gray to his *G. flavomentum*, is clearly a mistake.

43. PYRRHOPLECTES.

Type.

Pyrrhoplectes, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844). P. epauletta.
Pyrrhuloides, *Blyth, J. A. S. Beng.* xiii. p. 951 (1844). P. epauletta.

In structure apparently identical with *Carpodacus*, but its peculiar style of plumage renders it convenient to keep it distinct from that genus.

Hab. Himalaya Mountains.

1. Pyrrhoplectes epauletta.

Pyrrhula? epauletta, *Hodgson, Asiat. Research.* xix. p. 166 (1836); *Gray, Gen. B.* ii. p. 387 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 110 (1846); *id. Hand-l. B.* ii. p. 99, no. 7485 (1870).

Pyrrhoplectes epauletta, *Hodgs. Icon. ined. in Brit. Mus., Passeres,* pl. 303. figs. 3, 4 (nos. 462, 463), pl. 304. figs. 1, 2 (nos. 462, 463); *id. in Gray's Zool. Misc.* p. 85 (1844); *id. P. Z. S.* 1845, p. 36; *Bp. Consp.* i. p. 524 (1850); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 455 (1856); *Jerd. B. Ind.* ii. p. 382 (1863); *Hume, Str. F.* 1879, p. 108.

Pyrrhuloides epauletta, *Blyth, J. A. S. Beng.* xiii. p. 951 (1844); *id. Cat. B. Mus. As. Soc.* p. 337 (1849).

Adult male. General colour above black; wing-coverts and quills a little more glossy black, the innermost secondaries white along the inner web, forming a longitudinal streak; tail-feathers black; a broad frontal band of black; rest of crown and nape deep orange; lores, feathers over the eye, ear-coverts, cheeks, and under surface of body black, with a little orange-brown in the centre of the abdomen; thighs and under tail-coverts black; axillaries orange-buff; under wing-coverts white, edged with orange-buff, the lower ones entirely white; quills dusky below, ashy along the inner web: "bill black; legs fleshy grey; iris brown" (*B. H. Hodgson*). Total length 5·6 inches, culmen 0·55, wing 3·05, tail 2·25, tarsus 0·75.

Adult female. Different from the male. General colour above ruddy brown, ashy grey on the hind neck and mantle, and becoming deeper rufous or chestnut on the lower back, rump, and upper tail-coverts; wing-coverts ruddy brown, the median and greater series edged externally with chestnut; bastard-wing dusky, rufescent externally; quills black, the inner secondaries externally chestnut, with a longitudinal white mark along the inner web; tail-feathers blackish; forehead ashy blackish, as well as the lores and feathers around the eye and below the latter; feathers on the hinder crown blackish, edged with olive-yellow as they approach the nape, which is entirely olive-yellow; cheeks and ear-coverts dark ashy, washed with olive-yellow; sides of neck dark ashy; under surface of body chestnut, paler on the abdomen, browner on the breast and inclining to brick-red on the throat; thighs ashy grey, as also the sides of the upper breast; axillaries pale orange-buff; under wing-coverts white, edged with orange-buff; quills dusky below, ashy whitish along the inner web: "soft parts as in male" (*B. H. Hodgson*). Total length 5·5 inches, culmen 0·55, wing 3·1, tail 2·25, tarsus 0·7.

The brown colour on the abdomen of the male seems to disappear entirely with age, but it is more often the remains of immature plumage, for, from many specimens in the Hume Collection in a state of change, it is evident that the young male at first resembles the old female and gradually acquires the full black plumage.

Hab. Himalayas, from Simla to Sikhim.

a. ♂ ad. sk.	Kotegurh, near Simla.	Hume Coll.
b, *c*. ♂ ad.; *d*, *e*. ♀ ad.; *f*, *g*. ♂ juv. sk.	Nepal.	Hodgson Coll. (Types of species.)
h. ♂ ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
i, *k*. ♂ ♀ ad.; *l*, *m*. ♂ juv. sk.	Native Sikhim, Jan. 1877 (*L. Mandelli*).	Hume Coll.
n. ♂ ad. sk.	Native Sikhim, Feb. 1876 (*L. Mandelli*).	Hume Coll.
o. ♂ juv. sk.	Native Sikhim, Feb. 1874 (*L. Mandelli*).	Hume Coll.
p, *q*, *r*, *s*. ♂ ad. sk.	Native Sikhim, March (*L. Mandelli*).	Hume Coll.
t, *u*. ♀ ad.; *v*. ♂ imm. sk.	Native Sikhim, March (*L. Mandelli*).	Hume Coll.
w, *x*. ♀ ad. sk.	Native Sikhim, April 1874 (*L. Mandelli*).	Hume Coll.
y. ♂ ad. sk.	Native Sikhim, Aug. 1874 (*L. Mandelli*).	Hume Coll.
z. ♂ ad. sk.	Interior of Sikhim, April 1873 (*L. Mandelli*).	Hume Coll.
a'. ♂ ad. sk.	Interior of Sikhim, Aug. 1873 (*L. Mandelli*).	Hume Coll.
b', *e'*. ♂ ♀ ad.; *d'*, *e'*. ♂ juv. sk.	Sikhim, Feb. (*L. Mandelli*).	Hume Coll.
f'. ♀ ad. sk.	Sikhim, March 1874 (*L. Mandelli*).	Hume Coll.
g'. ♂ ad. sk.	Sikhim, July 1873 (*L. Mandelli*).	Hume Coll.
h'. ♀ ad. sk.	Sikhim, August 1874 (*L. Mandelli*).	Hume Coll.
i'. ♀ ad. sk.	Sikhim, Oct. 1873 (*L. Mandelli*).	Hume Coll.
k', *l'*. ♂; *m'*. ♀ ad. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
n', *o'*. ♀ ad. sk.	Sikhim (*W. E. Brooks*).	Hume Coll.
p'. ♂ imm. sk.	Darjiling, winter 1869–70 (*H. J. Elwes*).	Hume Coll.
q'–*u'*. ♂; *v'*, *w'*, *x'*. ♀ ad.; *y' z'*. ♂ imm.; *a*. ♀ imm. sk.	Darjiling.	Hume Coll.

44. CARPODACUS.

	Type.
Carpodacus, *Kaup, Natürl. Syst.* p. 161 (1829)	C. erythrinus.
Erythrothorax, *Brehm, Vög. Deutschl.* p. 249 (1831)	C. erythrinus.
Hæmorrhous, *Swains. Classif. B.* ii. p. 295 (1837)	C. purpureus.
Pyrrhulinota, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844)	C. erythrinus.
Propasser, *Hodgs. t. c.* p. 84	C. rhodochrous.

Hæmatospiza, *Blyth, J. A. S. Beng.* xiii. p. 951 (1844) ..... C. sipahi.
Phœnicospiza, *Blyth, J. A. S. Beng.* xxiii. p. 213 (1854) ..... C. rhodochrous.

Range. North-eastern and Eastern Europe, Asia Minor, Palestine, and Arabia, throughout N. Asia and the Indian Peninsula, especially developed in the Himalayas and mountains of Western China. North America generally to Mexico.

Key to the Species.

Males.

a. Sides of body and flanks perfectly uniform, without dusky shaft-streaks.
  a'. No pearly white spots on the head or throat, which are uniform.
    a''. Smaller: lower back and rump decidedly brighter than the back; lower abdomen and under tail-coverts decidedly paler than the breast, whitish, shaded with rosy ..... *erythrinus*, p. 393.
    b''. Larger: lower back and rump perfectly uniform with the back; abdomen and under tail-coverts rich crimson, like the rest of the under and upper surface. *sipahi*, p. 397.
  b'. Head spotted or spangled with pearly white.
    c''. Larger: throat and breast spotted with white dots, the latter being surrounded with broad crimson edges.
      a'''. Back deep rosy ..... *rubicilla*, p. 399.
      b'''. Back pale sandy brown, with a faint tinge of rosy ..... *severtzovi*, p. 400. / *rubicilloides*, p. 402.
    d''. Smaller: no white spots on the throat and breast.
      c'''. No rosy bands across the wings.
        a[1]. Back uniform ashy brown, with no dusky shaft-streaks ..... *stoliczkæ*, p. 403.
        b[1]. Back paler brown, with a rosy tinge and dusky shaft-lines ..... *sinaiticus*, p. 403.
      d'''. With two rosy bands across the wing, formed by the rosy ends to the median and greater coverts ..... *trifasciatus*, p. 404.
b. Sides of body streaked, or always with well-marked blackish shaft-lines; generally a distinct eyebrow.
  c'. Crown of head uniform, not broadly streaked with dark centres to the feathers [sometimes dusky shaft-lines may be present, but the general aspect of the head is uniform, in contrast to the colour of the back].
    e''. Breast perfectly uniform, not streaked [beyond a blackish shaft-line].
      e'''. With a conspicuous rosy or crimson rump-patch, contrasting with the back.

c^4. With no rosy spotting on the scapulars.
a^5. Larger: with distinct lanceolate plumes of pearly white on the throat and sides of the face.
a^6. No white tips to the median wing-coverts.
a^7. A distinct frontal band of narrow lanceolate plumes of pearly white ..... *rhodochlamys*, p. 406.
b^7. A distinct eyebrow of pearly-white plumes, duller towards the base of the nostrils, but not extending into a frontal band ..... *grandis*, p. 405.
b^6. Median wing-coverts tipped with rosy white, forming a wing-bar ..... *roseus*, p. 407.
b^5. Smaller: no lanceolate plumes on the throat and chin.
c^6. Feathers of back mottled with dark centres to the feathers; no spots of pink at the end of the inner secondaries.
c^7. Abdomen and under tail-coverts white, with a slight rosy tinge
a^8. Smaller: crown deep crimson, not different in tint from the back .... *purpureus*, p. 409.
b^8. Larger: crown bright crimson, contrasting with the back ..... *cassini*, p. 412.
d^7. Abdomen and under tail-coverts deep rose-colour like the breast ..... *rhodochrous*, p. 413.
d^6. Back uniform deep crimson; inner secondaries with a spot of rosy pink at the ends .... *vinaceus*, p. 416.
d^4. Scapulars with conspicuous markings of rosy pink; inner secondaries also with a large spot of rosy pink at the end of the outer web *rhodopeplus*, p. 417.
f''. Rump nearly of the same colour as the back, though not streaked like the latter; lower back and rump dark brown with a rosy tinge, but not showing a large rosy patch as in the allied species ..... *edwardsi*, p. 418.
f'. Breast ashy whitish, broadly streaked with brown.
g'''. Frontal band sharply defined and continued into a broad eyebrow.
e^4. Rose-colour confined to the throat. *mexicanus*, p. 423.
f^4. Rose-colour extending over the breast..... *roseipectus*, p. 424. / *amplus*, p. 424.
h'''. Frontal band not strictly confined to the forehead, but overspreading the crown..... *frontalis*, p. 421.

d'. Crown of head broadly streaked with dark brown or blackish like the back.
  g''. A broad band of pearly-white feathers across the forehead and continued on to the eyebrow; a more or less concealed white band above the dark ear-coverts; abdomen white.
    i'''. General colour above dark chocolate-brown ..... *thura*, p. 425.
    k'''. General colour above light earthy brown..... *dubius*, p. 427.
  h''. No pearly-white band across the forehead.
    l'''. Eyebrow and throat deep crimson; no pearly-white eyebrow ..... *ambiguus*, p. 428.
    m'''. Eyebrow, throat, and under surface rosy with a pearly gloss, especially on the eyebrow ..... *pulcherrimus*, p. 429.

Females *.

a. Rump ashy or brown like the back, without bright colours.
  a'. Flanks almost or entirely uniform, with never more than dusky shaft-lines, not broadly streaked with blackish brown like the breast.
    a''. Above rufous or olive-brown.
      a'''. No pale streak above the ear-coverts *erythrinus*, p. 393.
      b'''. A strongly marked pale band above the ear-coverts.
        *a*⁴. Above olive-brown; ochreous below..... *vinaceus*, p. 416.
        *b*⁴. Above and below ruddy brown, with a reddish tinge on the rump and abdomen..... *edwardsi*, p. 419.
    b''. Above pale sandy or whity brown, like the under surface of body ..... *stoliczkæ*, p. 403.
  b'. Flanks thickly streaked with blackish brown like the breast.
    c''. Uniform above.
      c'''. Above deep chocolate-brown ..... *mexicanus*, p. 423.
      k'''. Ashy brown above ..... *frontalis*, p. 421.
    d''. Broadly streaked above.
      l'''. Under tail-coverts uniform, without blackish centres.
        *c*⁴. Under tail-coverts white ..... *purpureus*, p. 410.
        *d*⁴. Under tail-coverts sandy buff like the abdomen ..... *rhodochrous*, p. 414.
      m'''. Under tail-coverts with blackish centres ..... *roseipectus*, p. 424.
        *e*⁴. Larger: wing over 3·6 inches. } *grandis*, p. 405.
        *a*⁵. Rump nearly uniform ..... } *rubicilla*, p. 399.

* This "Key" is less complete than for the males, as I have some doubts as to the correct determination of some of the hen birds, and some I have not seen. It can only be taken as a rough guide to the determination of the females.

b^5. Rump streaked with blackish brown ..... *rhodochlamys*, p. 407.
f^4. Smaller: wing not exceeding 3·6 inches.
c^5. Inner secondaries with a large spot of ochreous at the end of the outer web of the inner secondaries ..... *rhodopeplus*, p. 418.
d^5. No conspicuous spot at the end of the inner secondaries, which are pale-edged.
a^6. No olive on the upper surface.
a^7. Light eyebrow very broad and plain, not streaked with blackish..... *verreauxi*, p. 416.
b^7. Light eyebrow indistinct and lined with blackish shaft-streaks.
a^8. No olive-green on the back.
a^9. Dull white below .... *ambiguus*, p. 428.
b^9. Sandy-coloured below . *pulcherrimus*, p. 430.
b^8. Upper parts washed with olive-green .. .. *cassini*, p. 412.
b. Rump rosy; breast washed with rosy..... *roseus*, p. 408.
c. Rump yellow; broadly streaked with black; throat and breast chestnut-brown, the fore neck and breast streaked with black ..... *thura*, p. 426.
d. Rump uniform bright golden yellow ..... *sipahi*, p. 398.

1. Carpodacus erythrinus.

Loxia erythrina, *Pall. N. Comm. Acad. Sci. St. Petersb.* xiv. p. 587, pl. 23. fig. 1 (1770); *Gm. Syst. Nat.* i. p. 864 (1788).
Crimson-headed Finch, *Lath. Gen. Syn.* ii. pt. i. p. 271 (1789).
Loxia cardinalis (*nec L.*), *Beseke, Vög. Kurlands*, p. 77 (1792).
Loxia rosea (*nec Pall.*), *Vieill. Ois. Chant.* pl. lxv. (1805).
Loxia erythræa, *Endler & Scholz, Schlesische Naturf.* i. p. 17, pl. 5, ii. p. 185, pl. 77 (1809–10).
Fringilla olivacea, *Rafin. Caratt.* p. 6 (1810, *teste Salvad.*).
Pyrrhula erythrina, *Pall. Zoogr. Rosso-Asiat.* ii. p. 8 (1811); *Temm. Man. d'Orn.* i. p. 335 (1820); *Naum. Vög. Deutschl.* iv. p. 172, pl. 113 (1824); *Werner, Atlas, Granivores*, pl. 33 (c. 1827); *Ménétr. Cat. rais. Cauc.* p. 43 (1832); *Bree, B. Eur.* iii. pl. to p. 69 (1864); *Borggr. Vogelf. Norddeutschl.* p. 74 (1869); *Newton, ed. Yarr. Brit. B.* ii. p. 174 (1877).
Fringilla olivacea, *Rafin. Caratt.* p. 6 (1810, *teste Salvad.*).
Fringilla erythrina, *Meyer, Vög. Liv- und Esthl.* p. 77, cum tab. (1815); *Kittl. Kupf. Vög.* pl. 32. fig. 1 (1832); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 182 (1840); *Sundev. Svensk. Fogl.* pl. 65. fig. 2 (c. 1870).
Coccothraustes rosea, *Vieill. N. Dict. d'Hist. Nat.* xiii. p. 539 (1817).
Linaria erythrina, *Boie, Isis*, 1822, p. 552.
Coccothraustes erythrina, *Bonn. et Vieill. Enc. Méth.* iii. p. 1003 (1823).
Fringilla incerta, *Risso, Hist. Nat. Eur. Mérid.* iii. p. 52 (1826); *Roux, Orn. Provenç.* pl. 78 bis (c. 1826).

Carpodacus erythrinus, *Kaup, Natürl. Syst.* p. 161 (1829); *Gray, Gen. B.* ii. p. 384 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 110 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 122 (1849); *Bp. & Schl. Monogr. Loxiens*, p. 12, pl. 14 (1850); *Bp. Consp.* i. p. 534 (1850); *Cab. Mus. Hein.* Th. i. p. 165 (1850); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 456 (1856); *Jaub. & Barth.-Lapomm. Rich. Orn.* p. 118, cum tab. (1859); *von Nordm. Bull. Nat. Mosc.* xxxiii. pt. 1, p. 16 (1860); *Swinh. Ibis*, 1863, p. 95; *Jerd. B. Ind.* ii. p. 398 (1863); *Filippi, Viagg. Pers.* p. 349 (1865); *Blyth, Ibis*, 1866, p. 228; *Degl. & Gerbe, Orn. Eur.* i. p. 254 (1867); *Blyth, Ibis*, 1867, p. 44; *Beavan, Ibis*, 1868, p. 177; *Pelz. t. c.* p. 318; *Doderl. Avif. Sicil.* p. 77 (1869); *Brooks, Ibis*, 1869, p. 59; *Fritsch, Vög. Eur.* tab. 22, figs. 12, 13 (c. 1870); *Gray, Hand-l. B.* ii. p. 101, no. 7507 (1870); *Dresser, B. Eur.* iv. p. 75, pl. 195 (1871); *Gould, B. Gt. Brit.* iii. pl. 43 (1871); *Salvad. Faun. Ital., Ucc.* p. 16 (1871); *Swinh. P. Z. S.* 1871, p. 387; *Harting, Handb. Brit. B.* p. 112 (1872); *Alst. & Harvie Brown, Ibis*, 1873, p. 64; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Hume & Henders. Lahore to Yark.* p. 259 (1873); *Dresser, Ibis*, 1875, p. 245; *Wardlaw Ramsay, t. c.* p. 352; *Danf. & Harvie Brown, t. c.* p. 414; *Brooks, Str. F.* 1875, p. 255; *Blyth & Wald. B. Burm.* p. 94 (1875); *Butler & Hume, t. c.* p. 498; *Seebohm & Harvie Brown, Ibis*, 1876, p. 115; *Scully, Str. F.* 1876, p. 170; *Fairb. t. c.* p. 261; *Tacz. Bull. Soc. Zool. France*, i. p. 181 (1876); *Prjev. in Rowley's Orn. Misc.* ii. p. 181 (1877); *Butler, Str. F.* 1877, p. 230; *Finsch, Ibis*, 1877, p. 51; *Seebohm, t. c.* p. 165; *Danf. t. c.* p. 274; *Wardlaw Ramsay, t. c.* p. 461; *David & Oust. Ois. Chine*, p. 350 (1877); *Tacz. Bull. Soc. Zool. France*, ii. p. 151 (1877); *Danf. Ibis*, 1878, p. 25; *Seebohm, t. c.* p. 334; *Hume & Davison, Str. F.* vi. p. 409 (1878); *Ball, Str. F.* vii. p. 233 (1878); *Hume, t. c.* p. 504 (1878); *Butler, Cat. B. Sind etc.* p. 48 (1879); *Bogd. B. Cauc.* p. 68 (1879); *Finsch, Reis. West-Sibir.* p. 100 (1879); *Tacz. Bull. Soc. Zool. France*, iv. p. 138 (1879); *Hume, Str. F.* 1879, p. 108; *Scully, t. c.* p. 335; *Butler, Cat. B. S. Bomb. Pres.* p. 63 (1880); *Vidal, Str. F.* 1880, p. 72; *Inglis, t. c.* p. 257; *Butler, t. c.* p. 416; *Barnes, t. c.* p. 457; *Wardlaw Ramsay, Ibis*, 1880, p. 67; *Biddulph, Ibis*, 1881, p. 83; *Giglioli, t. c.* p. 204; *Scully, t. c.* p. 577; *Reid, Str. F.* 1881, p. 57; *C. Swinh. Ibis*, 1882, p. 114; *Seebohm, t. c.* pp. 219, 378; *Tacz. Bull. Soc. Zool. France*, vii. p. 394 (1882); *Davidson, Str. F.* 1882, p. 314; *Oates, B. Burm.* i. p. 345 (1883); *Davison, Str. F.* 1883, p. 403; *Seebohm, Ibis*, 1883, p. 10; *Severtz. t. c.* p. 56; *Homeyer & Taneré, MT. orn. Ver. Wien*, 1883, p. 90; *Seebohm, Hist. Brit. B.* ii. p. 46 (1884); *Brooks, Ibis*, 1884, p. 234; *Marshall, t. c.* p. 420; *Radde, Orn. Cauc.* p. 163 (1884); *Murray, Vertebr. Faun. Sind*, p. 189 (1884); *Swinh. & Barnes, Ibis*, 1885, p. 129; *Salvad. Elench. Ucc. Ital.* p. 180 (1887).

Erythrothorax rubrifrons, *Brehm, Vög. Deutschl.* p. 249 (1831); *id. Naum.* 1856, p. 276; *id. Vogelf.* p. 90 (1855).

Chlorospiza incerta, *Bp. Faun. Ital., Ucc.* pl. 38 (1832); *Degl. Orn. Eur.* i. p. 202 (1849); *Bp. Consp.* i. p. 513 (1850).

Erythrospiza erythrina, *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Gould, B. Eur.* pl. 206; *Blyth, J. A. S. Beng.* xii. p. 953 (1844).

Hæmorrhous roseus, *Jerd. Madr. Journ.* xi. p. 36 (1840).

Pyrrhulinota rosæcolor vel P. rosea, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 302. figs. 1–3 (no. 464), pl. 304. fig. 5 (no. 464); *id. in Gray's Zool. Misc.* p. 85 (1844).

Propasser sordida, *Hodgs. Icon. ined.* pl. 300. figs. 1, 2 (no. 452); *id. in Gray's Zool. Misc.* p. 85 (1844).
Pyrrhulinota roseata, *Hodgs. P. Z. S.* 1845, p. 36.
Pyrrhula (Carpodacus) erythrina, *Middend. Sibir. Reis.* p. 150 (1851); *Schrenck, Reis. Amurl.* p. 294 (1859); *Radde, Reis. Sibir.* p. 185 (1863).
Carpodacus roseus (*nec Pall.*), *Leith Adams, P. Z. S.* 1859, p. 177.
Carpodacus erythræus, *Dybowski, J. f. O.* 1868, p. 335.
Carpodacus erythrinus grebnitskii, *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 265 (1885).

Adult male. General colour above dark brown, the feathers of the mantle and upper back slightly mottled with dusky centres, all washed with rosy or pale crimson; lower back and rump dull rosy; lesser wing-coverts like the back; median and greater coverts dark brown, edged with whity brown at the tips, slightly tinged with rosy; bastard-wing, primary-coverts, and quills dark brown, edged with paler or whity brown, tinged with rosy, especially on the primaries; upper tail-coverts light brown, slightly washed with rosy; tail-feathers brown, edged with reddish brown; crown of head dull crimson, extending on to the occiput, nape, and hind neck; lores ashy; eyelid dull whitish; ear-coverts brown, washed with crimson, as well as below the eye; cheeks, throat, and breast bright crimson, fading away paler on the latter; centre of breast and abdomen dull white, slightly washed with crimson; sides of body and flanks brown, slightly washed with crimson; thighs brown; under tail-coverts white; under wing-coverts and axillaries yellowish buff with ashy bases, edge of wing washed with crimson; quills below dusky, ashy along the inner edge: "bill greyish horny, culmen dusky; legs, feet, and claws brownish; iris hazel-brown" (*J. Scully*). Total length 5·5 inches, culmen 0·45, wing 3·2, tail 2·25, tarsus 0·75.

The specimen described is a male collected by Mr. Meves in North Russia on the 22nd of June, and therefore in full breeding-plumage. Indian specimens are as a rule much more brilliant, with crimson all over the upper surface and on the wings and tail-feathers, while the under surface is rich crimson, becoming paler and more rose-coloured on the abdomen. The lores and upper margin of the ear-coverts are very dark brown, forming a stripe. Along with these brilliantly coloured specimens occur paler rose-coloured birds: and Colonel Butler marks these rosy specimens as in cold-weather plumage, while the crimson birds he considers to be in full breeding-plumage. Occasionally these full-plumaged birds have a mixture of saffron-yellow on the throat and on the wings and tail.

Adult female. General colour above olive-brown, with dusky centres to the feathers of the mantle and back; lower back and rump uniform olive-brown, as well as the upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dark brown, edged with olive and tipped with yellowish white, forming a double wing-bar; bastard-wing, primary-coverts, and quills dark brown, edged with olive, white on the edge of the primaries; tail-feathers dark brown, edged with olive; crown of head like the back, and streaked with

dusky centres to the feathers; lores ashy; eyelid whitish; ear-coverts dark brown washed with olive; cheeks light ochreous brown, with a distinct malar streak of dusky; throat dull white, streaked with brown; fore neck and breast ochreous buff, with distinct dusky centres to the feathers; abdomen white; sides of body and flanks brown with dusky stripes; thighs brown; under tail-coverts white, with brown centres to the longer ones; under wing-coverts and axillaries ochreous buff, the outer ones with brown bases; quills below dusky, ashy along the inner edge: "bill light fleshy brown; legs, feet, and claws also light fleshy yellow; iris dark brown" (*C. T. Bingham*): "legs and feet livid fleshy; claws bronzy" (*J. Scully*). Total length 5·2 inches, culmen 0·4, wing 3, tail 2, tarsus 0·75.

Young male. Resembles the old female, but has the stripes on the throat and breast rather smaller and not so distinct. Total length 5·2 inches, culmen 0·45, wing 3·1, tail 2, tarsus 0·7.

Young birds are generally recognized by the yellow tint on the under surface and the yellowish tips to the wing-coverts, which form a very distinct double wing-bar.

Winter-plumaged examples of the adult female are always more buff than in summer, when the under surface gets bleached to dull white, with the stripes very much obliterated.

Hab. Northern Europe and Siberia to Kamtschatka, wintering to the south of these localities, especially in India and the Burmese Peninsula. Accidental in Western Europe.

a. ♀ ad. sk.	Kamtschatka.	Purchased.
b. ♂ ad. sk.	Russia.	Moscow Mus. [P.].
c. ♀ ad. sk.	Archangel.	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Wytegra, N. Russia, June 22, 1869 (*W. Meves*).	Salvin-Godman Coll.
e, f. ♂ juv. sk.	Onega Lake, June 17, 1869 (*W. Meves*).	Salvin-Godman Coll.
g, h. ♂ ♀ ad. sk.	Karadagh, Asia Minor, May 20, 1876 (*C. G. Danford*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Karij Valley, Elburz Mountains, Aug. 8, 1872.	W. T. Blanford, Esq. [C.].
k. ♀ ad. sk.	Altai Mountains.	Gould Coll.
l. ♂ ad. sk.	Chin, Altai Mountains, June 9, 1876 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
m. ♀ ad. sk.	Turkestan (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
n. ♂ ad. sk.	Afghanistan (*Dr. Griffith*).	India Museum.
o, p. ♂ ad.; *q.* ♀ ad. sk.	Kandahar, April 1881.	Col. Swinhoe [P.].
r. ♀ ad. sk.	Said Yanoo, May 5, 1881.	Col. Swinhoe [P.].
s, t. ♂ ad. sk.	Khusan, W. Afghanistan, April 1885.	Dr. Aitchison [C.].
u. ♀ ad. sk.	Sun-koh, May 18, 1885.	Dr. Aitchison [C.].
v. ♂ juv. sk.	Sehwan, Sind, Oct. 19, 1887 (*A. O. H.*).	Hume Coll.
w. ♂ ad. sk.	Goond, Sind Valley, May 25, 1871 (*W. E. Brooks*).	Hume Coll.
x, y. ♂ ♀ ad. sk.	Sambhur, April 1878 (*R. M. Adam*).	Hume Coll.

z. ♂ ad. sk.	Mount Aboo, April 5, 1875 (*E. A. Butler*).	Hume Coll.
a'. ♂ ad. sk.	Abu Station, April 29, 1858 (*G. King*).	Hume Coll.
b', *c'*, *d'*. ♂ ad. sk.	Dera Ghazi Khan, March 1872.	Hume Coll.
e' ♀ ad. sk.	Attock, 1869.	Hume Coll.
f'. ♂ ad. sk.	Agrore, April 27, 1870 (*H. H. Unwin*).	Hume Coll.
g'. ♀ ad. sk.	Lahore, Dec. 12, 1865 (*C. H. T. Marshall*).	Gould Coll.
h'. ♀ ad. sk.	Delhi, April 2, 1876 (*C. T. Bingham*).	Hume Coll.
i'. ♂ ad. sk.	Near Saharunpur, Nov. 5, 1868 (*A. O. H.*).	Hume Coll.
k'. ♂ ad. sk.	Kirkichu, Ladak, June 24, 1870 (*G. Henderson*).	Hume Coll.
l'. ♂ ad. sk.	Lè. Ladak, July 1870 (*G. Henderson*).	Hume Coll.
m'. ♂ ad. sk.	Ladak.	Purchased.
n'. ♂ imm. sk.	Valley of Astor, 12,000 feet.	R. B. Sharpe, Esq. [P.].
o'. ♀ ad. sk.	Cashmere, Aug. 1870.	Hume Coll.
p', *q'*. ♂ ad. et imm. sk.	Cashmere (*Dr. Bellew*).	India Museum.
r'. ♀ juv. sk.	Gulmurg, Feb. 13, 1874 (*W. E. Brooks*).	Hume Coll.
s'. ♀ ad. sk.	Dhurmsala, April 1870.	Hume Coll.
t', *u'*. ♂ ♀ ad. ; *v'*. ♂ juv. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill.
w', *x'*. ♀ ad. sk.	Pangee, N.W. Himalayas, June 7, 1869.	Hume Coll.
y', *z'*, *α*, *β*. ♂ ad. sk.	Simla, 1868.	Hume Coll.
γ. ♀ ad. sk.	Mahasoo, near Simla, Sept. 16, 1879 (*W. Davison*).	Hume Coll.
δ. ♀ ad. sk.	Butwari, Baghirati Valley, May 11, 1874 (*W. E. Brooks*).	Hume Coll.
ε. ♀ ad. sk.	Mussoorie, Sept. 1879.	Hume Coll.
ζ. ♀ ad. sk.	Almora, May 13, 1868.	Hume Coll.
η. ♂ ad. sk.	Dehra Doon, 1870.	Hume Coll.
θ. [♂] juv. sk.	Ramnuggur, Kumaon, April 3, 1871 (*Dr. G. King*).	Hume Coll.
ι. ♂ ad. sk.	Kumaon (*Gen. Strachey*).	India Museum.
κ. ♀ ad. sk.	Khatmandu, Nepal, April 19, 1877 (*Dr. J. Scully*).	Hume Coll.
μ. ♂ ad. sk.	Nepal.	Hodgson Coll. [P.]. (Type of *C. rosæcolor*.)
ν, *ξ*. ♂ ad. ; *o*, *π*, *ρ*. ♀ ad. sk.	Nepal.	Hodgson Coll.
σ, *τ*. ♂ ad. ; *υ*. ♀ ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
φ, *χ*. ♂ ♀ ad. sk.	Behar.	Hodgson Coll.
ψ. ♀ ad. sk.	Oudh, Jan. 1872.	Hume Coll.
ω. ♀ ad. sk.	Oudh, Feb. 1872.	Hume Coll.
a'. ♂ ad. sk.	Chumparun district, March 27, 1869 (*R. M. Adam*).	Hume Coll.
β', *γ'*, *δ'*, *ε'*. ♀ ad. sk.	Etawah, 1865.	Hume Coll.
ζ'. ♂ ad. sk.	Etawah, Feb. 9, 1869.	Hume Coll.

η'. ♂ juv. sk.	Etawah, April 8, 1869.	Hume Coll.
θ'. ♂ ad. sk.	Etawah, March 29, 1869.	Hume Coll.
ι'. ♀ ad. sk.	Etawah, Nov. 9, 1865.	Hume Coll.
κ'. ♂ ad. sk.	Etawah, Dec. 2, 1865.	Hume Coll.
λ', μ', ν'. ♀ ad. sk.	Cawnpur, Feb. 1876 (*W. E. Brooks*).	Hume Coll.
ξ'. ♀ ad. sk.	Cawnpur, March 2, 1876 (*W. E. Brooks*).	Hume Coll.
o', π'. ♂; ρ'. ♀ ad. sk.	Native Sikhim, April 1874 (*L. Mandelli*).	Hume Coll
σ'. ♀ ad. sk.	Native Sikhim, June 1873 (*L. Mandelli*).	Hume Coll.
τ'. ♀ ad. sk.	Native Sikhim, Oct. 1873 (*L. Mandelli*).	Hume Coll.
υ'. ♂ ad. sk.	Interior of Sikhim, June 1873 (*L. Mandelli*).	Hume Coll.
$\phi', \chi', \psi', \omega'$. ♂ ad.; *a*, *b*. ♀ ad.; *c*, *d*. Juv. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
e. ♀ ad. sk.	Sikhim, March 1876 (*L. Mandelli*).	Hume Coll.
f, *g*. ♂ ad. sk.	Sikhim, April 1875 (*L. Mandelli*).	Hume Coll.
h. ♂ ad.; *i*. ♀ jun. sk.	Sikhim, Sept. 1875 (*L. Mandelli*).	Hume Coll.
k. ♂ juv. sk.	Sikhim, Nov. 1876 (*L. Mandelli*).	Hume Coll.
l. ♂ ad. sk.	Darjiling, 1872 (*J. Gammie*).	Hume Coll.
m. ♂ ad. sk.	Shillong, Khasia Hills, Dec. 15, 1877 (*W. Davison*).	Hume Coll.
n, *o*. ♂ ♀ ad.; *p*, *q*. ♂ juv. sk.	Shillong, Oct. 1877 (*J. Cockburn*).	Hume Coll.
r. ♂ ad. sk.	Dilkusha, Cachar, March 15, 1880 (*J. Inglis*).	Hume Coll.
s. ♂ ad. sk.	Manipur, March 2, 1881 (*A. O. H.*).	Hume Coll.
t. ♀ ad. sk.	Boori-Bazar, Manipur, March 12, 1881 (*A. O. H.*).	Hume Coll.
u. ♀ imm. sk.	Moirang, Manipur, March 30, 1881 (*A. O. H.*).	Hume Coll.
v, *w*. ♂ ad. sk.	Bishunpur, Manipur, March 13, 1881 (*A. O. H.*).	Hume Coll.
x. ♂ ad. sk.	Aimole, Manipur, April 15, 1881 (*A. O. H.*).	Hume Coll.
y. ♂ ad. sk.	Kokshin-Koonoo, Manipur, April 2, 1881 (*A. O. H.*).	Hume Coll.
z. ♂ ad. sk.	Machi, Manipur, May 8, 1881 (*A. O. H.*).	Hume Coll.
a'. ♂ ad. sk.	Palamow, Jan. 14, 1878.	Hume Coll.
b'. ♀ ad. sk.	Mhow, March 2, 1882.	Colonel Swinhoe [P.].
c', *d'*. ♂ ad. sk.	Shada, Khandeish, Nov. 1880 (*J. Davidson*).	Hume Coll.
e'. ♂ ad. sk.	Khandeish, Feb. 3, 1880 (*J. Davidson*).	Hume Coll.
f'. ♂ ad.; *g'*, *h'*. ♀ ad. sk.	Matheran, Bombay, April 1874.	Hume Coll.

i'. ♂ ad. sk.	Mahabaleshwur Hills, May 1874 (*S. B. Fairbank*).	Hume Coll.
k'. ♀ ad. sk.	Mahabaleshwur Hills, April 1874 (*S. B. Fairbank*).	Hume Coll.
l', *m'*, *n'*. ♂ ad.; *o'*. ♂ juv. sk.	Belgaum, Oct. 1879 (*E. A. Butler*).	Hume Coll.
p'. ♂ ad. sk.	Belgaum, Dec. 27, 1879 (*E. A. B.*).	Hume Coll.
q', *r'*. ♂ ♀ ad. sk.	Belgaum, Jan. 1880 (*E. A. B.*).	Hume Coll.
s'. ♂ ad. sk.	Mysore, Jan. 28, 1874.	Capt. Bingham [P.].
t'. ♂ ad. sk.	Wynaad, Dec. 4, 1877 (*J. L. Darling*).	Hume Coll.
u'. ♂ ad. sk.	Khotagherry, Nilghiris, Feb. 15, 1871 (*Miss Cockburn*).	Hume Coll.
v'. ♂ ad. sk.	Khotagherry, March 2, 1875 (*Miss Cockburn*).	Hume Coll.
w'. ♂ ad. sk.	Near Segore, Nilghiris, Feb. 20 (*W. Davison*).	Hume Coll.
x'. ♂ ad. ak.	Coonoor, Jan. 24, 1881 (*W. D.*).	Hume Coll.
y'. ♂ ad. sk.	Ootacamund, Jan. 8, 1881 (*W. D.*).	Hume Coll.
z, *a*. ♂ ad.; *β*, *γ*. ♀ ad. sk.	Ootacamund, Feb. 1881 (*W. D.*).	Hume Coll.

2. Carpodacus sipahi.

Corythus sipahi, *Hodgs. Asiatic Researches*, xix. p. 151 (1836).
Propyrrhula sipahi, *Hodgs. Icon. ined., Passeres*, pl. 307. figs. 1, 2 (nos. 320, 321); *id. in Gray's Zool. Misc.* p. 85 (1844).
Hæmatospiza boetoensis, *Blyth, J. A. S. Beng.* xiii. p. 951 (1844); *id. Cat. B. Mus. As. Soc.* p. 122 (1849).
Strobilophaga sipahi, *Gray, Gen. B.* ii. p. 387 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 110 (1846).
Hæmatospiza sipahi, *Blyth, Cat. B. Mus. As. Soc.*, App. p. 342 (1849); *Bp. & Schl. Monogr. Loxiens*, p. 33, pls. 39, 40 (1850); *Bp. Consp.* i. p. 526 (1850); *Gould, B. Asia*, v. pl. 24 (1850); *Blyth, J. A. S. Beng.* xxiii. p. 213 (1854); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 454 (1856); *Jerd. B. Ind.* ii. p. 394 (1863); *Blyth, Ibis*, 1867, p. 43; *Beavan, Ibis*, 1868, p. 177; *Bulger, Ibis*, 1869, p. 169; *Hume, Str. F.* 1869, p. 108.
Pinicola sipahi, *Gray, Hand-l. B.* ii. p. 109, no. 7644 (1870).

Adult male. General colour above bright scarlet, the feathers ashy or white at the base: lesser and median coverts like the back; greater coverts dusky blackish, externally dull scarlet; bastard-wing, primary-coverts, and quills dusky blackish, edged with dark vermilion, brighter on the secondaries, which are more broadly margined: upper tail-coverts like the back; tail-feathers blackish, edged with dull red; head all round and under surface of body bright scarlet; nasal plumes dusky, forming a narrow dark line across the forehead; thighs sooty black; under tail-coverts scarlet with black bases; under wing-coverts ashy, edged with scarlet; axillaries scarlet; quills below dusky, ashy along the inner edge: "bill yellow; legs fleshy brown; iris hoary brown" (*Hodgson*). Total length 7 inches, culmen 0·6, wing 4, tail 2·6, tarsus 0·7.

Adult female. Different from the male. General colour above olive-yellow, strongly mottled with dusky, the bases of the feathers being white, the body of the feathers dusky, and the margins olive-yellow; rump bright golden yellow; wing-coverts like the back, the edges of the median and greater coverts a little brighter yellow; bastard-wing, primary-coverts, and quills dusky brown, edged with olive-yellow, a little brighter on the primaries; upper tail-coverts dusky olive, with clearer yellow edges; tail-feathers dusky brown, washed externally with dull olive; crown of head like the back, but the yellow a little brighter; lores and feathers round the eye pale olive-yellow; ear-coverts dusky brown, washed with olive-yellow, with whitish shaft-lines; cheeks clear olive-yellow; throat ashy, washed with olive-yellow, and mottled with dusky centres to the feathers; remainder of under surface of body clear ashy, more or less mottled with dusky centres to the feathers; sides of body and flanks like the breast, and slightly tinged with ashy; thighs dusky; under tail-coverts white, tinged with olive-yellow and mottled with dusky bases; under wing-coverts and axillaries ashy, washed with olive-yellow; quills below dusky, ashy along the inner edge: "bill, legs, and iris as in the male, but duller" (*Hodgson*). Total length 6·5 inches, culmen 0·65, wing 3·75, tail 2·35, tarsus 0·8.

Young male. At first resembles the adult female, but has the rump orange and an orange tinge on the head and throat; the margins of the primaries reddish.

The scarlet dress is apparently gained by a moult, and full-plumaged specimens are often found with olive-margined quills, the remains of the immature dress. Newly moulted birds have the colours very bright, the males being often nearly crimson; but they appear to fade from exposure, being occasionally of a pale scarlet.

Hab. Central and Eastern Himalayas.

a, *b*. ♂ ♀ ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
c, *d*. ♂ ad.; *e*, *f*. ♀ ad. sk.	Nepal.	Hodgson Coll.
g. ♂ juv. sk.	Native Sikhim, Jan. 1877 (*L. Mandelli*).	Hume Coll.
h, *i*. ♂ ad.; *k*, *l*, *m*. ♀ ad. sk.	Native Sikhim, March 1875 (*L. M.*)	Hume Coll.
n. ♂ ad. sk.	Native Sikhim, April 1874 (*L. M.*).	Hume Coll.
o, *p*. ♂ ad.; *q*. ♀ ad. sk.	Sikhim, Jan. 1878 (*L. M.*).	Hume Coll.
r–*u*. ♂ ad. sk.	Sikhim, Feb. 1874–78 (*L. M.*).	Hume Coll.
v, *w*, *x*. ♀ ad. sk.	Sikhim, Feb. 1874–78 (*L. M.*).	Hume Coll.
y, *z*. ♂ ad. sk.	Sikhim, March 1874–78 (*L. M.*).	Hume Coll.
a', *b'*. ♂ ad.; *c'*. ♀ ad. sk.	Sikhim, April 1873–74 (*L. M.*).	Hume Coll.
d'. ♀ ad. sk.	Sikhim, Nov. 1873 (*L. M.*).	Hume Coll.
e', *f'*. ♂ ♀ ad. sk.	Sikhim, Dec. 1875 (*L. M.*).	Hume Coll.

g', *h'*, *i'*. ♂ ad. sk.	Sikhim (*L. M.*).	Hume Coll.
k'. ♂ ad. sk.	Rungbee, Sikhim, 5500 feet, July 5, 1871.	Hume Coll.
l', *m'*, *n'*. ♂ ad.; *o'*, *p'*, *q'*. ♂ imm.; *r'*, *s'*, *t'*, *u'*. ♀ ad. sk.	Darjiling.	Hume Coll.

3. Carpodacus rubicilla.

Lōxia rubicilla, *Güldenst. N. Comm. St. Petersb.* xix. p. 463, tab. 12 (1775).
Caucasian Grosbeak, *Lath. Gen. Syn.* ii. pt. i. p. 112 (1783).
Coccothraustes caucasicus, *Pall. Zoogr. Rosso-Asiat.* ii. p. 13 (1811).
Pyrrhula caucasica, *Keys. u. Blas. Wirb. Eur.* p. 40 (1840).
Strobilophaga caucasica, *Gray, Gen. B.* ii. p. 387 (1844).
Carpodacus rubicilla, *Bp. Consp.* i. p. 532 (1850, pt.); *Gould, B. Asia*, v. pl. 25 (1852, pt.); *Gray, Hand-l. B.* ii. p. 101, no. 7514 (1870); *Dresser, B. Eur.* iv. p. 69, pl. 193 (1878); *Bogd. B. Cauc.* p. 68 (1879); *Seebohm, Ibis*, 1883, p. 10; *Radde, Orn. Cauc.* p. 165, pl. vii. (1884).
Corythus rubicilla, *Bogd. B. Cauc.* p. 68 (1879).

Adult male (*N.* Caucasus). General colour above dark crimson, the feathers of the upper surface being dull ashy edged with crimson, the latter being the prevailing colour; rump deep rosy; lesser and median coverts like the back; greater coverts, bastard-wing, and primary-coverts blackish brown, edged with crimson and fringed with ashy whitish at the tips; quills blackish brown, edged with crimson, the secondaries with pale ashy brown tinged with rosy, all the quills fringed with white at the ends; upper tail-coverts dusky brown, broadly edged with crimson and minutely tipped with white; tail-feathers blackish brown, edged with dull rosy, with a narrow whitish fringe at the tip; crown of head dark crimson, minutely spotted with pearly grey; lores and feathers below the eye deep velvety crimson, as well as on the fore part of the cheeks; ear-coverts crimson washed with pearly grey, with a few distinct spots of the latter colour; cheeks and under surface of body deep crimson, becoming more rosy on the abdomen; throat minutely spotted with pearly grey, the spots larger on the fore neck and breast; sides of body and flanks paler crimson, with longitudinal pearly-grey centres; thighs ashy brown; under tail-coverts rosy, the long ones ashy brown washed with rosy and centred with dusky brown; under wing-coverts and axillaries ashy, edged with crimson; quills below dusky, reddish ashy along the inner edge. Total length 8 inches, culmen 0·6, wing 4·5, tail 3·65, tarsus 0·9. (*Mus. H. Seebohm.*)

Adult female. Different from the male. General colour above pale ashy brown, the feathers mesially streaked with black, the lower back, rump, and upper tail-coverts more decidedly grey and less distinctly mottled with dusky centres; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with ashy brown, the greater coverts whitish towards the ends, the

median ones with blackish shaft-lines; bastard-wing, primary-coverts, and quills dusky brown, edged with whity brown, the secondaries with whitish; tail-feathers blackish brown, narrowly edged with whity brown, the outer feathers margined with white; crown of head like the back, but a little more distinctly striped; lores dull ashy; ear-coverts and cheeks like the head, and similarly streaked; throat and under surface of body ashy whitish, with a faint tinge of ochre; the throat, fore neck, and breast distinctly striped with blackish-brown centres to the feathers, these stripes becoming narrower on the abdomen, sides of body, and flanks, the latter being more distinctly ashy grey; thighs ashy white; under tail-coverts ashy white, with very broad blackish centres; under wing-coverts and axillaries pale sandy buff, the former with blackish centres to the feathers; quills below dusky, ashy along the inner edge. Total length 7·5 inches, culmen 0·6, wing 4·35, tail 3·35, tarsus 0·8. (*Mus. H. Seebohm.*)

Hab. Caucasus.

4. Carpodacus severtzovi.

Carpodacus rubicilla (*nec Güldenst.*), *Bp. & Schl. Monogr. Loxiens*, p. 23, pl. 26 (1852); *Gould, B. Asia*, v. pl. 25 (1852, pt.); *Pelz. Ibis*, 1868, p. 318; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Hume & Henders. Lahore to Yark.* p. 258 (1873); *Dresser, Ibis*, 1875, p. 245; *Scully, Str. F.* 1876, p. 169; *Blanf. t. c.* p. 485; *Taez. Bull. Soc. Zool. France*, i. p. 182 (1876); *Prjev. in Rowley's Orn. Misc.* i. p. 298 (1876); *Hume, Str. F.* 1879, p. 108; *Biddulph, Ibis*, 1882, p. 82; *Severtz. Ibis*, 1883, p. 81; *Menzbier, Ibis*, 1885, p. 353.

Pyrrhula (Carpodacus) rubicilla, *Middend. Reis. Sibir., Zool.* p. 149 (1851); *Radde, Reis. Sibir., Vög.* p. 185 (1863).

Propasser rubicillus, *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 457 (1856).

Carpodacus severtzovi, *Sharpe, P. Z. S.* 1886, p. 354.

Adult male. General colour above pale ashy brown with a rosy gloss, with very faintly indicated dusky shaft-lines; rump pale rose-colour, with a faintly marked subterminal spot of ashy rose-colour: upper tail-coverts similar, but with ashy bases; lesser and median coverts ashy brown edged with rosy; greater coverts pale ashy, with light rose-coloured margins; bastard-wing, primary-coverts, and quills brown, fringed with pale rosy, the tips of the feathers edged with ashy whitish; tail-feathers dusky, edged with dull rosy; crown of head rosy crimson, mottled with subterminal spots of pearly white; the occiput and nape uniform, like the hind neck and back; lores and feathers round the eye dusky crimson; ear-coverts pale rose-colour; cheeks, throat, and under surface of body crimson, with subterminal spots of pearly white; the breast and abdomen paler and more rosy, the pearly-white spots gradually disappearing on the lower parts, the feathers of which are ashy, margined with rosy; sides of body and flanks ashy brown, washed with rosy; thighs ashy; under tail-coverts pale rose-colour; under wing-coverts and axillaries pale

ashy washed with rosy; quills below dusky, ashy along the inner edge: "upper mandible dusky yellowish, the lower one yellow, horny grey at the tip and on the sides; legs, feet, and claws dusky brown; iris brown" (*Dr. J. Scully*). Total length 7·7 inches, culmen 0·65, wing 4·55, tail 3·4, tarsus 1.

Adult female. Different from the male. General colour above ashy brown, slightly streaked with dusky centres to the feathers of the mantle and upper back, the lower back and rump almost uniform ashy brown, with scarcely perceptible shaft-lines; lesser wing-coverts uniform ashy brown; median and greater coverts dusky brown, externally edged with ashy, whitish on the extreme margin; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy brown, whitish towards the end of the feathers, the inner secondaries broadly margined with white; upper tail-coverts ashy brown, with darker brown centres; tail-feathers blackish brown, edged with ashy brown, the outer one margined with white; crown of head ashy brown like the back, streaked with blackish; lores and eyebrow, as well as the feathers round the eye and sides of the face, pale ashy streaked with blackish; ear-coverts darker brown, streaked with ashy margins to the feathers; cheeks and under surface of body creamy whitish; the throat, fore neck, and breast whity brown, with blackish shaft-streaks; the abdomen uniform whitish; sides of body and flanks pale ashy brown, streaked with dusky blackish; thighs and under tail-coverts whitish, streaked with blackish shaft-lines; under wing-coverts and axillaries ashy whitish, with a slight fulvous tinge on the latter; quills below dusky, ashy whitish along the inner edge. Total length 7·6 inches, culmen 0·65, wing 4·25, tail 3·15, tarsus 0·9.

Young birds resemble the old female, and in winter can scarcely be distinguished.

In first plumage the *young* are nearly uniform sandy brown, and isabelline below, with both mandibles pale. "Bill greyish horny, fuliginous on culmen: legs and feet brownish fleshy, claws light brownish; iris brownish black" (*Dr. J. Scully*).

Another young specimen, a trifle older, collected by Dr. Scully, had the "legs, feet, and claws dusky brown."

Very old males appear to have the back slightly washed with rose-colour or light crimson. Males in their first rosy plumage have the lower abdomen and under tail-coverts whitish washed with rosy, and the back more distinctly streaked as in the old female. The white spots on the sides of the face are often abraded in old birds, so that the ear-coverts and throat are often nearly uniform.

Hab. Eastern Siberia, southwards to Turkestan, and as far as Northern Cashmere, eastwards as far as the Tsaidam plains.

a. ♀ ad. sk.	Between Mazar and Chuchu Pass, Aug. 16, 1875 (*Dr. J. Scully*).	Hume Coll.
b. ♂ juv. sk.; *c.* ♂ ad. sk.	Toghrasu, Aug. 22, 1875 (*Dr. J. Scully*).	Hume Coll.

d, *e*,*f*. ♂ ad. sk.; *g*, *h*. ♀ ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
i. ♂ ad. sk.	Pangong Lake, Oct. 7, 1870 (*Dr. G. Henderson*).	Hume Coll.
k. Imm. sk.	Arpalik River, Aug. 13, 1870 (*Dr. G. Henderson*).	Hume Coll.
l. ♂ ad. sk.	Thibet.	Earl of Gifford [P.].
m. ♀ ad. sk.	Thibet.	India Museum [P.].
n, *o*, *p*. ♂ ad.; *q*, *r*, *s*. ♀ ad. sk.	Thibet (*Major Hay*).	Gould Coll. [P.].
t, *u*. ♂ ad. sk.; *v*. ♂ juv. sk.	Thibet, March 1875 (*L. Mandelli*).	Hume Coll.
w. ♀ ad. sk.	Thibet, Dec. 1876 (*L. Mandelli*).	Hume Coll.
x, *y*. ♂ ad. sk.	Ladak.	Purchased.
z. ♂ ad. sk.	Ladak (*Strachey*).	India Museum.
a'. ♀ ad. sk.	Ladak, Oct. 17, 1870 (*Dr. G. Henderson*).	Hume Coll.
b' ♂ ad. sk.	Gilgit, Jan. 1878 (*J. Biddulph*).	Hume Coll.
c'. ♀ ad. sk.	Gilgit, Feb. 23, 1878 (*J. Biddulph*).	Hume Coll.
d'. ♂ ad. st.	Central Asia.	Purchased.

5. Carpodacus rubicilloides.

Carpodacus rubicilloides, *Prjev. in Rowley's Orn. Misc.* ii. p. 299, pl. liv. (1877).

Adult male. Forehead, crown, cheeks, throat, and breast carmine-red, with small and narrow silvery streaks; stomach (with the exception of the white centre) rose-coloured with a vermilion tint; flanks reddish grey, with a few black streaks; nape, back and sides of the neck, back, and shoulders brownish grey, with a red shade and black shaft-streaks; rump dull rose-colour; quills and tail-feathers dark brown, with red and yellow edges, which are widest on the tertiaries; the tips of the secondaries are pale yellow; large wing-coverts have reddish-yellow, and the others have rosy-red edges; the under wing-coverts are pale brown, with rosy edges; the upper tail-coverts are brown; the under tail-coverts are rosy: bill comparatively larger and more conical than in *C. rubicilla*; upper mandible dark horn-colour, lower mandible yellow; tarsus (which is longer than in *C. rubicilla*) dark horn-colour; iris brown. Length 8–8·3 inches, wing 4·07–4·2, tail 3·4–3·5, tarsus 0·92. (*Prjevalski.*)

Female. Upper parts brownish grey, lighter on the rump and with black shaft-streaks; underparts yellowish white, marked with black lines, which are narrowed on the stomach; quills and tail-feathers dark brown, with narrow pale edges. Total length 7–7·6 inches, wing 3·77, tail 3·14, tarsus 0·87. (*Prjevalski.*)

Hab. Mountains of Kan-su.

6. Carpodacus stoliczkæ.

Propasser stoliczkæ, *Hume, Str. F.* 1874, p. 523; *Severtz. Str. F.* 1878, p. 431.

Adult male (type of species). General colour above pale ashy brown, entirely uniform except on the lower back and rump, which are pale rosy; wing-coverts like the back, with a wash of pale rosy near the edge of the wing; bastard-wing, primary-coverts, and quills pale brown, externally ashy brown, whitish along the edge of the primaries and tips of the secondaries; upper tail-coverts pale ashy brown, with whitish edges; tail-feathers dusky brown, edged with pale ashy brown, whitish on the extreme margins; crown of head like the back, the forehead crimson, the sinciput and feathers over the eye pearly white with a rosy tinge; lores crimson; sides of face rosy; feathers round eye crimson; ear-coverts and cheeks rosy; throat and breast rosy, deeper on the throat; abdomen pale ashy brown; sides of body, flanks, and thighs ashy brown; under tail-coverts white; under wing-coverts and axillaries pale ashy, with a tinge of rosy on the edge of the wing; quills below pale brown, ashy along the inner edge. Total length 6 inches, culmen 0·45, wing 3·6, tail 2·65, tarsus 0·75.

Adult female. Differs from the male in wanting all traces of crimson or rosy colour on the head and breast, the whole tone of the plumage being pale sandy brown, lighter on the lower back and rump as well as on the breast and abdomen; the head and throat with slightly indicated streaks of dark brown. Total length 5·8 inches, culmen 0·45, wing 3·45, tail 2·5, tarsus 0·8.

Hab. Yarkand.

a. ♀ ad. sk.	Khulustan Valley, June 6, 1874 (*J. Biddulph*).	Hume Coll.
b. ♀ ad. sk.	Yarkand.	Gould Coll.

7. Carpodacus sinaiticus.

Pyrrhula synoica, *Temm. Pl. Col.* iii. pl. 375. figs. 1, 2 (1825).
Pyrrhula sinaica, *Rüpp. Neue Wirb., Vög.* p. 101 (1835); *id. Syst. Uebers.* p. 79 (1845).
Carpodacus sinoicus, *Gray, Gen. B.* ii. p. 384 (1844).
Carpodacus sinaiticus, *Bp. & Schl. Monogr. Loxiens*, p. 17, pl. 18 (1850); *Bp. Consp.* i. p. 534 (1850); *Licht. Nomencl. Av. Berol.* p. 47 (1854); *Tristr. Ibis*, 1868, p. 208; *Wyatt, Ibis*, 1870, p. 516; *Gray, Hand-l. B.* ii. p. 102, no. 7524 (1870); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 655 (1870); *Tristr. Faun. & Flor. Palest.* p. 70 (1884).
Carpodacus uropygialis, *Licht. Nomencl. Av. Berol.* p. 48 (1854).
Erythrospiza githaginea (*nec Licht.*), *Clark Kennedy, Ibis*, 1874, p. 108.

Adult male. General colour above pale sandy brown with a rosy wash, the feathers faintly streaked with dusky shaft-lines; rump

uniform pale rosy; lesser wing-coverts paler sandy brown, washed with rosy; median and greater coverts sandy brown; bastard-wing and primary-coverts dusky brown, with rosy-brown edges; quills dusky brown, edged with sandy brown, broader on the secondaries; upper tail-coverts sandy brown; tail-feathers dusky brown, edged with sandy brown; crown of head dull sandy brown, washed with rosy; base of forehead crimson followed by a pearly gloss on the sinciput; lores, feathers round the eye, and eyebrow rosy or pale crimson with a pearly gloss; ear-coverts, cheeks, and throat rosy with a pearly gloss; remainder of under surface pale rosy, lighter on the abdomen; sides of body and flanks washed with pale sandy brown; thighs and under tail-coverts pale sandy brown, washed with rosy; under wing-coverts and axillaries pale ashy, washed with rosy; quills below dusky, ashy along the inner edge. Total length 5·7 inches, culmen 0·5, wing 3·5, tail 2·4, tarsus 0·8.

Hab. Sinaitic peninsula.

a. ♂ ad. sk.	Peninsula of Sinai.	Claude W. Wyatt, Esq. [P.].

8. Carpodacus trifasciatus *.

Carpodacus trifasciatus, *Verr. Nouv. Arch. du Mus.* vi. *Bull.* p. 39 (1870), vii. p. 60 (1871), viii. pl. iv. fig. 3 (1872).

Propasser trifasciatus, *David & Oustalet, Ois. Chine*, p. 353, pl. 93 (1877).

Adult. Iris reddish chestnut; bill clear brown, with the edges and the under mandible whitish; tarsi reddish grey; toes grey, with the claws brownish; face rosy white, of a silky appearance, with scaly feathers on the forehead and eyebrows, and the feathers of the throat lanceolate; vertex, nape, and back of a dark carmine-red, with the feathers margined with greyish; rump grey, tinged with rose-colour; upper tail-coverts carmine-red, the long ones inclining to blackish grey; breast and flanks carmine-red, paler than the back; centre of abdomen white; under tail-coverts blackish, edged with grey; tail and wings blackish, the latter ornamented with three transverse bands, formed by the rosy ends of the coverts and the white borders of the scapulars. Total length 7·4 inches, tail 3·15, wing 3·35, tarsus 0·9, bill 0·45. (*David & Oustalet.*)

Female. Unknown.

Hab. Western Szetchuen, China.

9. Carpodacus grandis.

Carpodacus grandis, *Blyth, J. A. S. Beng.* xviii. p. 810 (1849); *id. Cat. B. Mus. As. Soc.*, App. p. 342 (1849).

Carpodacus sophia, *Bp. & Schl. Monogr. Loxiens*, p. 22, pl. 34 (1850); *Bp. Consp.* i. p. 532 (1850).

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* I have not seen this species, and it may have stripes on the flanks; in which case it would have to be placed near *C. roseus*.

Carpodacus rhodochlamys (*nec Brandt*), *Gould, B. Asia*, v. pl. 26 (1852); *Blyth, J. A. S. Beng.* xxiii. p. 213 (1854).
Propasser rhodochlamys (*nec Brandt*), *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 458 (1856); *Jerd. B. Ind.* ii. p. 401 (1863); *Pelz. Ibis*, 1865, p. 318; *Hume, Str. F.* 1879, p. 108; *Biddulph, Ibis*, 1881, p. 84; *Scully, t. c.* p. 578.

Adult male. General colour above ashy brown, washed with rosy, all the feathers centred longitudinally with dusky blackish, less distinctly on the hind neck, which is clearer ashy, especially on the sides of the neck; rump clear rosy; lesser wing-coverts dull rosy; median and greater coverts dusky brown, edged with pale rosy; bastard-wing, primary-coverts, and quills dusky brown, fringed with pale rosy, broader on the secondaries; upper tail-coverts ashy, washed with rosy towards the ends; tail-feathers dusky brown, with pale reddish-brown edges; crown of head uniform dull rosy, the feathers edged with ashy; the nape more distinctly ashy; lores dull crimson, surmounted by a broad eyebrow of pale rosy, glossed with pearly white from the nostrils to the sides of the nape; eyelid reddish white, its hinder margin reddish brown, like the broad streak which passes above the ear-coverts, the latter being rosy like the cheeks and throat, glossed with pearly-white centres to the feathers, giving a somewhat lanceolate appearance; sides of neck uniform ashy; remainder of under surface rosy, with faint traces of ashy margins to the feathers; lower abdomen paler; sides of body and flanks ashy, washed with rosy and narrowly streaked with blackish; thighs ashy brown; under tail-coverts rosy, edged with whitish and with concealed dusky centres; under wing-coverts and axillaries ashy or ashy whitish, edged with pale rosy; quills below dusky, ashy along the inner edge: "upper mandible and extreme tip of lower mandible brown; rest of lower mandible, legs and feet fleshy, tinged with brown; claws dark brown; iris wood-brown" (*A. O. Hume*). Total length 7·1 inches, culmen 0·55, wing 3·75, tail 3·1, tarsus 0·85.

Adult female. Different from the male. General colour above ashy brown, all the feathers centred with blackish; rump slightly tinged with rosy; lesser wing-coverts like the back; median and greater coverts dusky brown, with blackish centres and paler edges, ashy towards the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy, the innermost secondaries edged with ashy whitish, resembling the greater coverts; upper tail-coverts brown, edged with ashy and slightly tinged with rosy; tail-feathers dusky brown, edged with ashy; crown of head like the back and streaked in the same manner; lores dusky; eyebrow dull white, narrowly streaked with black; eyelid whitish; upper edge of ear-coverts brown, forming a broad streak; ear-coverts and cheeks, as well as the under surface of body, creamy white, streaked with dusky blackish, broader on the fore neck and breast, narrower on the abdomen: sides of body and flanks ashy brown, streaked with dusky black; thighs ashy brown; under tail-coverts pale brown, edged with ashy and mesially streaked with black; under wing-coverts

and axillaries pale ashy fulvous, tinged with rosy; quills below dusky, ashy along the inner edge: "legs and feet and lower mandible brownish fleshy; upper mandible and claws rather dark brown; iris pale wood-brown" (*A. O. Hume*). Total length 7·3 inches, culmen 0·65, wing 3·65, tail 3·1, tarsus 0·89.

In the breeding-season the colours of the male are somewhat brighter and more lilac, and there are traces of dusky blackish shaft-lines on the throat and breast; the upper surface, too, is rather darker, and the head more distinctly rosy. Although the female described has a rosy tinge on the rump, none of the other specimens show this character, and it is probably only a sign of very old birds.

Hab. Afghanistan and Himalayas from Northern Cashmere to Native Sikhim.

a. ♂ ad. sk.	Pushut, Afghanistan (*Dr. Griffith*).	India Museum.
b, c. ♂ ad.; *d.* ♀ ad. sk.	Gilgit, May 1878 (*J. Biddulph*).	Hume Coll.
e, f. ♂ ad. et juv. sk.	Gilgit, June 1876 (*J. Biddulph*).	Hume Coll.
g. ♀ ad. sk.	Gilgit, July 1879 (*J. Biddulph*).	Hume Coll.
h. ♀ ad. sk.	Astor district, Sept. 24, 1876 (*J. Biddulph*).	Hume Coll.
i. ♀ ad. sk.	Astor district, 12,000 feet.	R. B. Sharpe, Esq. [P.].
k, l. ♂ ♀ ad. sk.	Kotegurh, 1872.	Hume Coll.
m. ♀ ad. sk.	Kotegurh, Nov. 1867.	Hume Coll.
n. ♀ ad. sk.	Pumlahie, Nov. 17, 1869.	Hume Coll.
o. ♂ ad. sk.	Baja in Kunaitee, Jan. 1, 1871.	Hume Coll.
p, q. ♂ ad.; *r, s.* ♀ ad. sk.	Simla, Nov. 1880 (*A. O. H.*).	Hume Coll.
t. ♂ ad. sk.	Simla, Dec. 1, 1880 (*W. Davison*).	Hume Coll.
u. ♂ ad. sk.	Near Simla.	Hume Coll.
v. ♂ ad. sk.	Near Chamba.	Capt. Stackhouse Pinwill [P.].
w. ♀ ad. sk.	Hills north of Masuri, 1872.	Hume Coll.
x. ♀ ad. sk.	Native Sikhim, Aug. 19, 1879 (*L. Mandelli*).	Hume Coll.

10. Carpodacus rhodochlamys.

Pyrrhula (Corythus) rhodochlamys, *Brandt, Bull. Sci. Acad. Imp. St. Pétersb.* 1843, p. 27.

Strobilophaga rhodochlamys, *Gray, Gen. B.* iii. App. p. 18 (1849).

Carpodacus rhodochlamys, *Bp. & Schl. Monogr. Loxiens*, p. 22, pl. 35 (1850, ♀); *Gray, Hand-l. B.* ii. p. 101, no. 7515 (1870); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dresser, Ibis*, 1875, p. 245; *Menzbier, Ibis*, 1885, p. 353.

Propasser rhodochlamys, *Stoliczka, Str. F.* 1875, p. 219.

Propasser rhodometopus, *Biddulph, Ibis*, 1881, p. 156.

Adult male. Similar to *C. grandis*, but differing in the forehead having pearly-pink plumes like the eyebrow. Total length 7·6 inches, culmen 0·55, wing 2·55, tail 3, tarsus 1.

Adult female. Not distinguishable from the female of *C. grandis*. Total length 7 inches, culmen 0·55, wing 3·4, tail 2·9, tarsus 0·95.

Hab. Altai Mountains to Turkestan and Yarkand.

a. ♂ ad. sk.	Yarkand.	R. B. Sharpe, Esq. [P.].
b. ♂ ad. sk.	Near Wernoi, Alatau district, March 5.	Dr. Severtzoff [C.].
c. ♂ ad. sk.	Near Wernoi, Oct. 8.	Dr. Severtzoff [C.].
d. ♀ ad. sk.	Near Wernoi, June 6.	Dr. Severtzoff [C.].
e. ♀ ad. sk.	Alatau Mountains, Nov.	Dr. Severtzoff [C.].
f. ♂; *g, h.* ♀ ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.

11. Carpodacus roseus.

Fringilla rosea, *Pall. Reis. Russ. Reichs*, iii. p. 699 (1776).
Passer roseus, *Pall. Zoogr. Rosso-Asiat.* ii. p. 23 (1811).
Pyrrhula rosea, *Temm. Man. d'Orn.* i. p. 335 (1820); *Naum. Vög. Deutschl.* iv. pl. 113. fig. 3 (1824); *Werner, Atlas, Insectivores*, pl. 32 (1827); *Bree, B. Eur.* ii. pl. to p. 76 (1864).
Carpodacus roseus, *Kaup, Natürl. Syst.* p. 161 (1829); *Gray, Gen. B.* ii. p. 384 (1844); *Bp. & Schl. Monogr. Loxiens*, p. 18, pls. 19, 20 (1850); *Bp. Consp.* i. p. 533 (1850); *Radde, Reis. Sibir.* p. 186 (1863); *Degl. & Gerbe, Orn. Eur.* i. p. 257 (1867); *Dybowski, J. f. O.* 1868, p. 335; *Gray, Hand-l. B.* ii. p. 102, no. 7522 (1870); *Fritsch, Vög. Eur.* p. 258, tab. 22. figs. 5, 6 (1870); *Tacz. J f. O.* 1873, p. 93, 1874, p. 336; *Swinh. Ibis*, 1875, p. 121: *Cordeaux, t. c.* p. 183; *Swinh. Ibis*, 1877, p. 145; *Seebohm, t. c.* p. 165; *Tacz. Bull. Soc. Zool. France*, i. p. 181 (1876); *Blakist. & Pryer, Ibis*, 1878, p. 245; *Gould, B. Asia*, v. pl. 33 (1879); *Blakist. & Pryer, B. Japan*, p. 175 (1882); *Jouy, Pr. U. S. Nat. Mus.* vi. p. 294 (1883); *Blakist. Amended List B. Japan*, p. 18 (1884).
Erythrospiza rosea, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *Gould, B. Eur.* iii. pl. 207.
Pyrrhula (Carpodacus) rosea, *Schrenk, Reis. Amurl.* p. 295 (1859).
Uragus sibiricus (*nec Pall.*), *Swinh. Ibis*, 1876, p. 333 (*lapsu*).
Propasser roseus, *David & Oust. Ois. Chine*, p. 352 (1878).

Adult male. General colour above rosy, the mantle and upper back rather more ashy, broadly streaked with black centres to the feathers; rump and lower back uniform rich rose-colour; lesser wing-coverts deep crimson; median and greater coverts dusky brown, edged with rosy and tipped with rosy white, forming a double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with rosy, the inner secondaries with ashy brown, white towards the end of the outer web, and resembling the inner greater coverts; upper tail-coverts deep rosy, centred with broad blackish streaks; tail-feathers blackish brown, edged with rosy; crown of head pale rosy; the forehead and sinciput glossy pearly white, forming a frontal band; lores and feathers round the eye dark crimson; ear-coverts and sides of face deep rose-colour; the fore part of the cheeks minutely spotted with pearly white; throat and malar line spangled with pearly-white spots, extending backwards towards the sides of the neck; fore neck and remainder of under surface deep rose-colour,

with narrow blackish shaft-lines; centre of lower breast and abdomen white; sides of body and flanks rosy, the latter with more distinct blackish shaft-lines; thighs ashy whitish; under tail-coverts whitish washed with rosy, with dusky centres; under wing-coverts and axillaries ashy white, tinged with rose-colour, those near the edge of the wing more distinctly edged with rosy; quills below dusky, ashy along the inner edge: "bill brown, the lower mandible grey; tarsus reddish grey; the toes brownish grey; iris chestnut" (*A. David*). Total length 6 inches, culmen 0·45, wing 3·5, tail 2·5, tarsus 0·75. (*Mus. H. Seebohm.*)

The specimen described is a male procured at Krasnoyarsk on the 10th of April, and now in Mr. Seebohm's collection. Another male from Pekin, in Mr. Seebohm's collection, is entirely rosy on the back, streaked with black on the mantle and upper back, and shows none of the ashy-grey colour apparent in the specimen described. The Pekin bird is probably an older individual.

Adult female. Different from the male. General colour above brown tinged with rosy, the feathers of the mantle and back broadly centred with blackish brown; lower back and rump rosy, with scarcely any indications of dusky centres to the feathers; lesser wing-coverts dull vermilion; median and greater coverts dusky brown, externally margined with ochreous buff, inclining to whitish at the ends; bastard-wing and primary-coverts dusky brown, edged with paler brown; quills dusky brown, margined with ochreous buff, paler on the secondaries, the inner secondaries more broadly edged, the innermost having the outer web ochreous buff; upper tail-coverts brown tinged with rosy, with blackish centres; tail-feathers dusky brown, edged with ochreous brown, slightly tinged with rosy; crown of head brown, washed with rosy and streaked with dusky brown, with a slight pearly gloss on the frontal feathers; lores ochreous buff; ear-coverts pale brown, streaked with dusky brown, slightly tinged with rosy; cheeks and under surface of body pale rosy, or brown washed with rosy, narrowly streaked with dusky brown or blackish, these streaks broader on the sides of the body, which are browner; abdomen whitish; thighs ashy; under tail-coverts white, slightly tinged with rosy and mesially streaked with blackish; under wing-coverts and axillaries whitish, with a vermilion tinge near the edge of the wing; quills below dusky, ashy along the inner edge. Total length 5·3 inches, culmen 0·5, wing 3·4, tail 2·2, tarsus 0·75. (*Mus. H. Seebohm.*)

Hab. Eastern Siberia, Japan, and China.

a. ♂ ad. sk.	Japan, Dec. 1874 (*Capt. St. John*).	Hume Coll.
b. ♀ ad.; *c*. ♂ juv. sk.	Kultuk, Lake Baikal, Feb.	Purchased.
d, *e*. ♂ ad. sk.	Kiachta, Transbaikalia, Jan. 8.	Purchased.

12. Carpodacus purpureus.

Purple Finch, *Catesby, Nat. Hist. Carol.* i. pl. 41 (1731); *Lath. Gen. Syn.* ii. pt. i. p. 275 (1783).

Bouvreuil violet de la Caroline, *Briss. Orn.* iii. p. 324 (1760).

Le Bouvreuil ou Bec-rond de la Caroline, *Montb. Hist. Nat.* iv. p. 395 (1778).

Fringilla purpurea, *Gm. Syst. Nat.* i. p. 923 (1788); *Wilson, Amer. Orn.* i. p. 119, pl. vii. fig. 4 (1808), v. p. 87, pl. 4. fig. 3 (1812); *Audubon, B. Amer.* pl. 4; *id. Orn. Biogr.* i. p. 24 (1831), v. p. 500 (1839); *Sw. & Rich. Faun. Bor.-Amer., Birds*, p. 264 (1831).

Hæmorrhous purpureus, *Swains. Classif. B.* ii. p. 295 (1837).

Erythrospiza purpurea, *Bp. Comp. List B. Eur. & N. Amer.* p. 34 (1838); *Jard. ed. Wils. Amer. Orn.* i. p. 119, pl. vii. fig. 4, ii. p. 182, pl. xlii. fig. 3; *Audub. B. Amer.* iii. p. 170, pl. 196 (1841).

Carpodacus purpureus, *Gray, Gen. B.* ii. p. 384 (1844); *Bp. Consp.* i. p. 533 (1850); *Baird, B. N. Amer.* p. 412 (1858); *Blakist. Ibis*, 1862, p. 6, 1863, p. 70; *Brown, Ibis*, 1868, p. 421; *Gray, Hand-l. B.* ii. p. 101, no. 7509 (1870); *Merrill, Rep. U. S. Geol. Surv.* vi. p. 678 (1872); *Coues, Key N. Amer. B.* p. 128 (1872); *id. B. N.-West*, p. 106 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 462, pl. 21. figs. 7, 8 (1874); *Coues, Bull. U. S. Geol. Surv.* iv. p. 577 (1878); *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 176 (1880); *Coues, Check-list N. Amer. B.* p. 47 (1882); *Salvin, Cat. Strickl. Coll.* p. 204 (1882); *W. E. Brooks, Ibis*, 1884, p. 235; *Coues, Key N. Amer. B.* 2nd ed. p. 346 (1884); *Turner, Pr. U. S. Nat. Mus.* viii. p. 239 (1885); *A. O. U. Check-list N. Amer. B.* p. 256 (1886); *Brewst. Auk*, 1886, p. 107; *Seton, t. c.* p. 323; *Fox, t. c.* p. 317.

Carpodacus californicus, *Baird, B. N. Amer.* p. 413, pl. 72. figs. 2, 3 (1858); *Coues, Ibis*, 1865, p. 164; *Baird, Ibis*, 1867, p. 270; *Cooper, B. Calif.* p. 154 (1870); *Belding, Pr. U. S. Nat. Mus.* i. pp. 391, 393 (1879).

Carpodacus purpureus, var. californicus, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 465, pl. 21. figs. 10, 11 (1874).

Carpodacus purpureus, *β.* californicus, *Belding, Pr. U. S. Nat. Mus.* i. p. 413 (1879).

Carpodacus purpureus californicus, *Ridgw. Pr. U. S. Nat. Mus.* iii. p. 176 (1880); *A. O. U. Check-list N. Amer. B.* p. 256 (1886); *Anthony, Auk*, 1886, p. 168; *Everm. t. c.* p. 181.

Adult male. General colour above vinous or pale crimson, the feathers of the back mottled with blackish centres, which are narrowly margined with ashy; lower back and rump rich rose-colour; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with vinous brown and tipped with rose-colour, the greater series edged with whitish at the ends; bastard-wing dusky brown; primary-coverts and quills dusky brown, edged with reddish brown, more or less tinged with rosy, the secondaries whiter towards their ends; upper tail-coverts ashy, rosy towards the ends, which are fringed with ashy white; tail-feathers dusky brown, edged with rosy brown; crown of head and hind neck brighter than the back, bright crimson, the sides of the hinder crown lighter crimson, but scarcely sufficient to mark an eyebrow; lores and feathers round eye ashy; ear-coverts, sides of face, cheeks,

throat, and breast crimson, becoming paler and more rosy on the breast; lower breast and abdomen white; sides of body and flanks pale crimson, the latter more or less ashy and broadly streaked with dusky brown; thighs ashy brown; under tail-coverts white, tinged with rose-colour; under wing-coverts and axillaries whitish, washed with rosy; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·45, wing 3·35, tail 2·2, tarsus 0·7.

Adult female. Different from the male. General colour above brown, streaked with darker brown centres to the feathers, which have mostly whitish margins, especially on the mantle and upper back; lesser wing-coverts brown; median and greater coverts dark brown, edged with lighter brown and margined with whitish at the ends; bastard-wing, primary-coverts, and quills dark brown, edged with lighter brown, the quills with whity brown; upper tail-coverts brown; tail-feathers brown, margined with ashy whitish; crown of head like the back and similarly streaked; lores whitish; sides of face brown, with a narrow white eyebrow above the ear-coverts; ear-coverts whiter in the centre; cheeks and under surface of body white spotted with brown, the spots larger and more triangular on the fore neck and breast, more longitudinal on the sides of the body and flanks; abdomen, thighs, and under tail-coverts white; under wing-coverts and axillaries ashy whitish, the former somewhat isabelline; quills below dusky, ashy whitish along the inner edge. Total length 5·3 inches, culmen 0·45, wing 3·1, tail 2·1, tarsus 0·7.

Male in first breeding-plumage (brown stage). Resembles the old female, but is washed with olive-yellow on the head and rump; the white edges to the wing-coverts tinged with olive-yellow; throat entirely unspotted and washed with saffron-yellow, which colour extends over the breast, the brown spots of which are smaller and less plentiful than in the adult female.

The young male after the first moult is everywhere browner than the adult female, which it otherwise resembles; the rump is lighter and more tawny, but has no yellow. The whole tone of the plumage is more ruddy, and the under surface is tinged with clear brown, and the spots are as plentiful as in the adult female.

For the above interesting stages of plumage the Museum is indebted to Dr. Hart Merriam. There can be no doubt that males breed in a brown plumage, which is that of the first year, and there is no necessity for the theory that the red plumage is the first full plumage of the young bird, being afterwards lost. The examination of a series of this and other species of Rose-Finches tends to prove that the red colour gains in intensity with age.

Specimens from California do not seem to be sufficiently distinct from *C. purpureus* to warrant their separation. A male from British Columbia is rather more uniform above, with the dusky centres of the dorsal plumage less pronounced; the sides of the crown are like the head, so that there is no perceptible superciliary streak. Total length 5·3 inches, culmen 0·5, wing 3·15, tail 2·1, tarsus 0·7.

Between this uniformly coloured bird and ordinary *C. purpureus*

intermediate specimens supply a complete link. The females seem to be rather greener than in typical *C. purpureus*.

Hab. Eastern North America from the Atlantic coast to the plains, breeding from the Middle States northward. The Californian race inhabits the Pacific coast-region, from British Columbia south to Southern California. (*A. O. U. Check-list, l. c.*)

a, b. ♂ ♀ ad. st.	North America.	Purchased.
c, d. ♂; *e, f.* ♀ ad. sk.	49th Parallel, April and May (*G. Dawson*).	N. A. Boundary Commission [P.].
g, h. ♂ ♀ ad. sk.	Washington, D.C. (*S. F. Baird*).	Sclater Coll.
i. ♂ ad. sk.	Washington (*C. Drexler*; Sm. no. 28419).	Salvin-Godman Coll.
k. ♀ ad. sk.	Smith's Woods, D.C. (*E. Coues*; Sm. no. 23967).	Salvin-Godman Coll.
l. ♂ ad. sk.	New Jersey (*J. H. Batty*).	U. S. Nat. Museum.
m. ♂ imm. sk.	Locust Grove, New York, April (*C. H. M.*).	Dr. C. Hart Merriam [P.].
n. ♂ imm. sk.	New Haven, Conn., Oct. 25, 1875 (*C. H. M.*).	Dr. C. Hart Merriam [P.].
o. ♂ ad. sk.	Kenwood, Illinois, April 1, 1876 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p, q. ♂ ♀ ad. sk.	Grand Crossing, Ill., April 1884 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
r. ♀ ad. sk.	Grand Crossing, May 9 (*H. K. C.*).	H. K. Coale, Esq. [P.].
s, t. ♂ ♀ imm. sk.	Chicago, Ill., October.	R. B. Sharpe, Esq. [P.].
u. ♂ imm. sk.	Hyde Park, Ill., May 11 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
v. ♀ ad. sk.	Illinois.	U. S. Nat. Museum [P.].
w. ♂ juv. sk.	Great Falls, Maryland, Oct. 11, 1859 (*E. Coues*; Sm. no. 28976).	U. S. Nat. Museum [P.].
x. ♂ ad. sk.	Ohio.	Prof. Kirtland [P.].
y, z. ♂ ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
a', b', c'. ♂ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
d', e'. ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
f'. ♀ ad. sk.	California.	Sclater Coll.
g'. ♂ ad. sk.	Santa Clara Valley, California, Feb. 17.	R. B. Sharpe, Esq. [P.].
h'. ♂ ad. sk.	Murphy's, California (*L. Belding*; Sm. no. 73927).	U. S. Nat. Museum.
i'. ♀ ad. sk.	Big Trees, Cal. (*L. Belding*; Sm. no. 73930).	U. S. Nat. Museum.
k', l'. ♂; *m'.* ♀ ad. sk.	California.	Lord Walsingham [P.].
n'. ♂ ad. sk.	Fort Tejon, Lower California (*J. Xantus*; Sm. no. 25609).	Sclater Coll.
o', p'. ♂ ♀ ad. sk.	Fort Tejon (*J. Xantus*; Sm. nos. 25618, 25620).	Salvin-Godman Coll.

13. Carpodacus cassini.

Carpodacus cassini, *Baird, Proc. Philad. Acad. N. Sci.* 1854, p. 119; *id. B. N. Amer.* p. 414 (1858); *Lord, Proc. R. Art. Inst.* iv. p. 119 (1864); *Coues, Ibis*, 1865, p. 164; *id. Proc. Philad. Acad. N. Sci.* 1866, p. 80; *Baird, Ibis*, 1867, p. 266; *Brown, Ibis*, 1868, p. 427; *Scl. & Salv. P. Z. S.* 1869, p. 362; *Gray, Hand-l. B.* ii. p. 107, no. 7512 (1870); *Cooper, B. Calif.* p. 155 (1870); *Coues, Key N. Amer. B.* p. 128 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Coues, B. N.-West*, p. 106 (1874); *Baird, Brewer, & Ridgw.* i. p. 460, pl. 21. figs. 4, 5 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 240 (1875); *Ridgw. Rep. Surv. 40th Par.* p. 457 (1877); *id. Proc. U. S. Nat. Mus.* iii. p. 176 (1880); *Coues, Check-list N. Amer. B.* p. 47 (1882); *id. Key N. Amer. B.* 2nd ed. p. 347 (1884); *Drew, Auk*, 1885, p. 16; *Hensh. t. c.* p. 333; *Scott, t. c.* p. 349; *A. O. U. Check-list N. Amer. B.* p. 256 (1887).

Adult male. General colour above brown with a rosy tinge, all the feathers mottled with black centres; lower back and rump uniform pale rosy; lesser wing-coverts more uniform than the back, and washed with deep rose-colour; median and greater coverts blackish, edged with deep rosy, whitish at the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with lighter brown, tinged with rosy, whiter near the ends of the secondaries; upper tail-coverts brown with a reddish tinge, and centred with blackish; tail-feathers dark brown, with lighter brown margins, tinged with rosy; crown of head deep crimson, contrasting with the hind neck, which is mottled like the back; lores ashy whitish; above the ear-coverts a rosy eyebrow; ear-coverts rosy, with a dusky brown streak along the upper edge, tinged with rosy; cheeks, throat, and fore neck rosy, washed with deep crimson on the former: breast rosy, shading off gradually towards the abdomen, which is whitish; sides of body and flanks browner, washed with rosy; thighs and under tail-coverts whitish, the latter centred with dusky shaft-lines and tinged with rosy; under wing-coverts ashy washed with rosy; axillaries light tawny buff; quills below dusky, ashy along the inner edge. Total length 5·8 inches, culmen 0·55, wing 3·75, tail 2·35, tarsus 0·7.

Adult female. Similar to the female of *C. purpureus*, but larger. Total length 5·8 inches, culmen 0·55, wing 3·6, tail 2·4, tarsus 0·75.

Hab. Western United States from the eastern base of the Rocky Mountains to the Pacific coast, and south over the plateau region of Mexico. (*A. O. U. Check-list, l. c.*)

a, *b*. ♂ ad.; *c*, *d*. ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.]
e. ♂ ad. sk.	Stamford, Colorado (*G. F. Morcom*).	R. B. Sharpe, Esq. [P.].
f, *g*. ♂ ♀ ad. sk.	California.	Lord Walsingham [P.].
h. ♂ ad. sk.	Mount Shasta, June 14, 1884 (*C. H. Townsend*; Sm. no. 99805).	U. S. Nat. Museum.
i. ♂ ad. sk.	Mount Shasta, July 30 (*C. H. Townsend*; Sm. no. 92380).	R. B. Sharpe, Esq. [P.].

k. ♀ juv. sk.	Mount Shasta, Aug. 25 (*C. H. Townsend*; Sm. no. 92384).	U. S. Nat. Museum [P.].
l. Juv. sk.	Mount Shasta, Aug. 28 (*C. H. Townsend*; Sm. no. 92383).	H. K. Coale, Esq. [P.].
m. ♂ ad. sk.	Valley of Mexico (*Le Strange*).	Salvin-Godman Coll.

14. Carpodacus rhodochrous.

Fringilla rhodochroa, *Vigors, P. Z. S.* 1831, p. 23; *Gould, Cent. B. Himal. Mts.* pl. 31. fig. 2 (1832).

Erythrospiza rhodochroa, *Blyth, J. A. S. Beng.* xiii. p. 953 (1844).

Propasser pulcherrima vel rhodochroa, *Hodgs. Icon. ined. in Brit. Mus., Passeres,* pl. 301. figs. 465, 466; *id. in Gray's Zool. Misc.* p. 85 (1844).

Propasser rhodochrous, *Hodgs. P. Z. S.* 1845, p. 36; *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 459 (1856); *Jerd. B. Ind.* ii. p. 403 (1863); *Blyth, Ibis,* 1867, p. 44; *Beavan, t. c.* p. 141; *Pelz. Ibis,* 1868, p. 318; *Brooks, Str. F.* 1875, p. 255; *Hume, Str. F.* 1879, p. 108; *Butler, Str. F.* 1880, pp. 368, 417; *Lloyd, Ibis,* 1882, p. 469.

Carpodacus rhodochrous, *Gray, Gen. B.* ii. p. 384 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 109 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 122 (1849); *Bp. Consp.* i. p. 531 (1850); *Gray, Hand-l. B.* ii. p. 101, no. 7516 (1870).

Phœnicospiza rhodochroa, *Blyth, J. A. S. Beng.* xxiii. p. 213 (1854).

Adult male. General colour above ruddy brown, with a wash of rose-colour, the feathers of the back broadly centred with blackish brown: the rump uniform deep rose-colour; lesser wing-coverts like the back; median and greater coverts blackish, externally and at the tips ruddy brown like the back, rather paler on the greater series; bastard-wing dusky brown; primary-coverts and quills blackish, externally margined with ruddy brown, paler on the inner secondaries; upper tail-coverts dusky, washed with dark rose-colour; tail-feathers dusky brown, edged with ruddy brown; crown of head dusky crimson, the feathers with only slightly indicated dark centres; a broad stripe commencing at the base of the forehead, and extending backwards over the eye to the sides of the nape, bright rose-colour with a pearly gloss; lores dark crimson, as also the eyelid; ear-coverts, sides of face, and cheeks dark rose-colour, with a broad streak of dusky crimson behind the eye; throat and under surface of body rich rose-colour, a little clearer and purer on the breast and abdomen; sides of body and flanks ochreous brown; thighs brown; under tail-coverts pale rose-colour; axillaries pale sandy brown, washed with rose-colour; under wing-coverts white, washed with rosy, especially near the edge of the wing; quills below dusky, ashy along the inner edge: "bill dark brown, the upper mandible at gape and the lower mandible brownish fleshy; the lower mandible shaded on the sides and at the tip with dusky; legs and feet

brownish fleshy; iris nut-brown" (*W. Davison*). Total length 5·8 inches, culmen 0·5, wing 2·9, tail 2·5, tarsus 0·8.

A male bird shot by Mr. Brooks at Dhurmsala in June has the back-feathers partly ochreous brown, as in the first stage, with a few of the crimson-tinged feathers of the fully adult male. The rosy colour on the rump, eyebrow, and under surface is rather paler. This is doubtless a male of the previous year. Other specimens in the Museum show traces of the striped plumage still remaining among the rosy feathers of the throat and breast.

Adult female. Different from the male. General colour above brown, tinged with ochreous brown on the mantle and back, all the feathers of which are centred with black, the rump rather paler ochreous brown, and with only faint traces of dusky centres; lesser wing-coverts uniform dark brown; median and greater coverts blackish, rather broadly edged with deep sandy brown, paler on the margins; bastard-wing blackish, fringed with pale sandy brown; primary-coverts and quills blackish, edged with deep sandy brown, rather lighter on the primaries; upper tail-coverts dull ochreous brown, with scarcely perceptible dusky centres; tail-feathers dusky brown, edged with sandy brown; crown of head a little darker than the back, and similarly centred with black; the forehead rather paler, and streaked with ochreous buff; lores and a ring round the eye blackish, surmounted by an eyebrow of pale ochreous buff, broad and distinct; ear-coverts blackish brown, except on the lower part, which, like the cheeks, is deep ochreous buff, streaked with black, separated from the throat by a narrow malar line of black; under surface of body ochreous buff, the throat whiter and streaked with black, the fore neck and chest rather more distinctly, the streaks narrower on the breast; abdomen uniform; sides of body and flanks streaked with dusky blackish; thighs and under tail-coverts ochreous buff, the latter with narrow dusky shaft-lines; under wing-coverts and axillaries uniform ochreous buff; quills below dusky, ashy along the inner edge: "upper mandible dark brown, lower mandible pale fleshy brown, slightly tinged with bluish; legs, feet, and claws pale fleshy brown; iris nut-brown" (*W. Davison*). Total length 5 inches, culmen 0·45, wing 2·85, tail 2·4, tarsus 0·72.

The *young male* in first winter plumage cannot be distinguished from the old females. Four specimens are in the Hume Collection, shot by Mr. Davison at Simla in November and December 1880. He describes the soft parts as follows:—"Upper mandible dark brown, the lower mandible greyish fleshy brown, suffused with dusky on the sides and at the tip; legs and feet greyish fleshy brown, claws dark brown; iris nut-brown."

Very old females gain a slight tinge of rosy on the breast.

Specimens from the more eastern portions of the bird's range are rather darker and more richly coloured.

Hab. Himalayas, from Cashmere to Nepal.

a. ♂ ad. sk.	Dhurmsala, Jan. 1870 (*W. E. Brooks*).	Hume Coll.
b. ♀ ad. sk.	Lake Nullah, above Dhurmsala, May 1870 (*W. E. Brooks*).	Hume Coll.
c. ♂ ad. sk.	Dhurmsala, June 1870 (*W. E. Brooks*).	Hume Coll.
d. ♂ ad. sk.	Baja in Kunaiti, Jan. 1, 1871.	Hume Coll.
e, *f*. ♂ ♀ ad. sk.	Pumlahie, Sept. 1869.	Hume Coll.
g. ♀ ad. sk.	Kotegurh.	Hume Coll.
h. ♂ ad. sk.	Kotegurh, Oct. 16, 1869.	Hume Coll.
i. ♂ ad. sk.	Kotegurh, Dec. 1868.	Hume Coll.
k, *l*, *m*. ♂ ad.; *n*, *o*. ♀ ad. sk.	Kotegurh, March 1871.	Hume Coll.
p. ♀ ad. sk.	Dulsar, Kotekhaie, Feb. 23, 1871.	Hume Coll.
q. ♀ ad. sk.	Tatulee, Kotekhaie, Feb. 27, 1871.	Hume Coll.
r, *s*. ♂ ad.; *t*, *u*. ♀ ad. sk.	Simla, Feb. 1, 1867 (*F. Jones Thompson*).	Hume Coll.
v, *w*. ♂ ad.; *x*, *y*. ♀ ad.; *z*. ♂ juv. sk.	Simla, Nov. 1880 (*W. Davison*).	Hume Coll.
a'. ♂ ad.; *b'*, *c'*. ♀ ad.; *d'*, *e'*, *f'*. ♂ juv. sk.	Simla, Dec. 1880 (*W. Davison*).	Hume Coll.
g', *h'*, *i'*. ♂ ad.; *k'*, *l'*, *m'*. ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
n'. ♂ ad. sk.	Jerripani, Masuri, 1869.	Hume Coll.
o'. ♂ ad. sk.	Masuri, 1869.	Hume Coll.
p', *q'*. ♂ ad sk.	Middle range of hills north of Masuri.	Hume Coll.
r'. ♂ ad. sk.	Derali, May 13, 1874 (*W. E. Brooks*).	Hume Coll.
s'. ♂ ad.	Gangaotri, May 18, 1874 (*W. E. B.*).	Hume Coll.
t'. ♂ ad. sk.	Bhyringutti, May 16, 1874 (*W. E. B.*).	Hume Coll.
u'. ♂ ad. sk.	Kumaon (*Strachey*).	India Museum.
v', *w'*, *x'*. ♂ ad. sk.	Dolaka, Nepal, Jan. 1875 (*L. Mandelli*).	Hume Coll.
y', *z'*. ♀ ad. sk.	Dolaka, Nepal, Jan. 1876 (*L. Mandelli*).	Hume Coll.
α, *β*, *γ*, *δ*. ♂ ad. sk.	Nepal.	Hodgson Coll.
ε. ♂ ad. st.	Himalayas.	Purchased.

15. Carpodacus verreauxi.

Carpodacus verreauxi, *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871).
Propasser verreauxi, *David & Oustalet, Ois. Chine*, p. 355 (1877).

Adult female (type of species). General colour above dark brown, the feathers of the mantle and upper back broadly centred with black, the edges of the feathers creamy or yellowish buff; the rump and upper tail-coverts lighter and more uniform brown, with faintly indicated dusky centres; lesser wing-coverts dark brown; median and greater coverts, bastard-wing, primary-coverts, and quills blackish brown, edged with pale brown, the primaries with whity brown, the inner secondaries distinctly white towards the end of the outer web; upper tail-coverts reddish brown with dusky centres:

tail-feathers dark brown, margined with lighter brown; crown of head like the back, all the feathers centred with black; the feathers above the eye slightly varied with whitish margins, these light feathers continued into a rather broad superciliary band of pale sandy buff above the ear-coverts; lores ashy whitish; ear-coverts dark brown, the lower part slightly streaked with sandy buff; cheeks and throat ashy whitish, broadly streaked with black like the rest of the under surface, which is sandy buff; the abdomen uniform and unspotted; sides of body and flanks thickly streaked with black; thighs brown; under tail-coverts sandy buff with blackish shaft-lines; under wing-coverts and axillaries deep sandy buff, paler on the lower series; quills below dusky, more ashy along the inner edge. Total length 5·5 inches, culmen 0·4, wing 2·8, tail 2·8, tarsus 0·7. (*Mus. Paris.*)

Male. Unknown.

Hab. Moupin.

The only specimen in the Paris Museum, for the opportunity of describing which I have to thank Prof. Milne-Edwards, is undoubtedly a female of some species closely allied to *C. rhodopeplus*; but it is decidedly smaller than the latter bird.

16. Carpodacus vinaceus.

Carpodacus vinaceus, *Verr. Nouv. Arch. Mus.* vi. *Bull.* p. 39 (1870), vii. p. 61 (1871), viii. pl. iv. figs. 1, 2 (1872).
Propasser vinaceus, *David & Oust. Ois. Chine*, p. 356, pl. 96 (1877).

Adult male (type of species). Dark crimson, the feathers being blackish with dark crimson edges; lower back and rump finer crimson or deep rosy; upper tail-coverts blackish, edged with dark crimson like the back; wing-coverts like the back; bastard-wing, primary-coverts, and quills blackish, edged externally with reddish brown, the inner secondaries with a large spot of rosy pink at the end of the outer web; tail-feathers black; crown of head deep crimson; a distinct eyebrow of lanceolate pearly rose-tipped feathers; lores dusky blackish; sides of face, ear-coverts, and sides of body deep crimson, with faintly indicated blackish shaft-lines, more distinct on the abdomen, which is paler rose-colour; thighs black; under tail-coverts blackish, tipped with rose-colour; under wing-coverts and axillaries sooty black; quills dusky black below, a little more ashy on the inner web: "bill brown; feet reddish grey; iris reddish chestnut" (*A. David*). Total length 5·5 inches, culmen 0·5, wing 2·8, tail 2·2, tarsus 0·8. (*Mus. Paris.*)

Adult female. Different from the male. General colour above nearly uniform dark ochreous brown; the feathers of the mantle and back slightly mottled with dusky centres; the lower back and rump uniform; wing-coverts like the back, the median and greater series rather paler at the ends; bastard-wing, primary-coverts, and quills dark brown, externally ochreous brown, the innermost secondaries with a large mark of yellowish white at the ends of

the outer web; upper tail-coverts like the back; tail-feathers dark brown, with ochreous-brown edges: crown of head rather more decidedly ochreous than the back and strongly mottled with dark brown centres; lores and eyelid buffy whitish; ear-coverts uniform dark ochreous brown; cheeks rather lighter, whity brown anteriorly; under surface of body lighter and more ruddy ochreous; the throat rather broadly and the fore neck and breast more narrowly streaked with dusky brown; abdomen uniform ruddy ochreous brown; the sides of body and flanks rather more dusky brown, as also the thighs; under tail-coverts brown, with ochreous edges and tips, the longer ones edged with whitish; under wing-coverts and axillaries dull ochreous brown, the lower greater coverts paler; quills below dusky, ashy along the inner edge. Total length 5·7 inches, culmen 0·45, wing 2·55, tail 2·15, tarsus 0·7.

Hab. Western China.

a, b. ♂ ♀ ad. sk.	Ichang Gorge, Yangtze River.	C. Maries, Esq. [C.].	

17. Carpodacus rhodopeplus.

Fringilla rhodopepla, *Vigors, P. Z. S.* 1831, p. 23; *Gould, Cent. B. Himal. Mts.* pl. 31. fig. 1 (1832).

Propasser rhodopeplus, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 299. figs. 1, 2 (no. 340); *id. in Gray's Zool. Misc.* p. 84 (1844); *id. P. Z. S.* 1845, p. 36; *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 458 (1856); *Jerd. B. Ind.* ii. p. 400 (1863); *Blyth, Ibis*, 1867, p. 44; *Hume, Str. F.* 1873, p. 15, 1879, p. 108.

Erythrospiza rhodopepla, *Blyth, J. A. S. Beng.* xiii. p. 952 (1844).

Carpodacus rhodopeplus, *Gray, Gen. B.* ii. p. 384 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 109 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 121 (1849); *Bp. Consp.* i. p. 531 (1850); *Gray, Hand-l. B.* ii. p. 101, no. 7518 (1870).

Adult male. General colour above dark crimson or ruddy brown washed with crimson, all the feathers centred with black, the feathers of the mantle relieved with a spot of clear rose-colour near the end of the outer web; rump rosy, all the feathers being tipped with clear rose-colour; wing-coverts blackish, edged with dark crimson; the median and greater coverts relieved by a spot of clear rosy at the end of the outer web; bastard-wing dusky blackish, fringed with ashy rosy; primary-coverts and quills blackish, edged with dark crimson, the inner secondaries with a rosy mark near the end of the outer web; upper tail-coverts dark crimson; tail-feathers dusky brown, edged with dark crimson; crown of head dark crimson like the back, but the black centres not so distinct; along the sides of the crown a broad eyebrow of pointed rosy feathers with a slight pearly gloss; lores, feathers round the eye, and ear-coverts blackish, washed with dark crimson, with a little patch of pointed rosy feathers near the lower edge of the latter; cheeks and under surface of the body rich crimson, with mesial black streaks; the throat ornamented with pointed tips of pearly rose-colour; all the breast-feathers broadly tipped with crimson; the abdomen paler and more rosy,

uniform; sides of body and flanks ruddy brown, with crimson ends to the feathers, paler on the latter; thighs ochreous brown; under tail-coverts ruddy brown, with crimson ends to the feathers; under wing-coverts dusky, the longer ones whitish, washed with rosy; axillaries ochreous brown, edged with rosy; quills below dusky, ashy along the inner edge. Total length 6·8 inches, culmen 0·6, wing 3·3, tail 2·9, tarsus 0·9.

Adult female. Different from the male. General colour above brown, the feathers with broad central streaks of black; the head like the back; the mantle-feathers edged with ochreous buff; rump more uniform brown, with scarcely any indication of dusky centres; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with ochreous brown, and with a pale ochreous-buff mark near the end of the outer web; bastard-wing blackish, narrowly fringed with ashy; primary-coverts and quills blackish, edged with ochreous brown, paler ochreous buff along the margin of the primaries, and with a spot of light ochreous buff near the end of the inner secondaries, resembling the greater coverts; upper tail-coverts dull ochreous brown; tail-feathers dark brown, with ochreous-brown margins; lores, feathers round the eye, and ear-coverts blackish; a broad eyebrow of pale ochreous buff: feathers below the eye blackish; lower part of ear-coverts and cheeks ochreous buff, streaked and mottled with black, and separated from the throat by a narrow black malar line; throat and under surface of the body clear ochreous buff, streaked with black, the streaks narrower on the breast; abdomen uniform; sides of body and flanks washed with brown, with distinct blackish shaft-stripes; thighs pale ashy; under tail-coverts ochreous buff, with dusky centres to the feathers; under wing-coverts dusky brown, washed with ochreous, the longer ones ashy whitish; axillaries dull ochreous buff: quills below dusky, ashy along the inner edge. Total length 6·5 inches, culmen 0·55, wing 3·05, tail 2·65, tarsus 0·85.

Hab. Himalaya Mountains, from Masuri to Sikhim.

a. ♂ ad. sk.	Hills north of Masuri.	Hume Coll.
b, c. ♂ ♀ ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
d. ♂ ad.; *e, f, g.* ♀ ad. sk.	Nepal.	Hodgson Coll.
h. ♂ ad.; *i, k, l.* ♀ ad. sk.	Dolaka, Nepal, Jan. 1875–76 (*L. Mandelli*).	Hume Coll.
m. ♀ ad. sk.	Sikhim, 1879 (*L. Mandelli*).	Hume Coll.

18. Carpodacus edwardsi.

Carpodacus edwardsi, *Verr. N. Arch. Mus.* vi. *Bull.* p. 39 (1870), vii. p. 58 (1871), viii. pl. 3 (1872).
Propasser saturatus, *Blanf. J. A. S. Beng.* xli. p. 168 (1872); *id. Ibis*, 1873, p. 218; *Hume, Str. F.* 1873, p. 418.
Propasser edwardsi, *David & Oust. Ois. Chine*, p. 355, pl. 94 (1877); *Hume, Str. F.* 1878, vol. ii. p. 415; *id. Str. F.* 1879, p. 108.

Adult male. General colour above ruddy brown, washed with crim-

son, the mantle and back streaked with dusky blackish centres to the feathers; rump and upper tail-coverts more uniform, with scarcely any indications of dusky centres; lesser wing-coverts ruddy brown; median and greater coverts dusky, edged with ruddy brown, with pale rosy tips, forming a double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with ruddy brown, more rosy on the primaries, the inner secondaries with pale rosy spots at the ends, like the inner greater coverts; tail-feathers dusky brown, edged with ruddy brown; crown of head dull crimson, with longitudinal dusky centres; base of forehead varied with rose-coloured tips to the feathers, more distinct over the eye, where they form a conspicuous eyebrow; lores, feathers round the eye, and upper part of ear-coverts dark crimson; remainder of ear-coverts, sides of face, and cheeks rosy, the feathers tipped with pale pearly rose-colour; throat similarly coloured to the cheeks; fore neck and breast dark crimson, with dusky shaft-lines, the lower breast washed with rosy like the abdomen, which is entirely rose-colour, with dusky shaft-lines; sides of body and flanks brown, washed with crimson; thighs brown; under tail-coverts brown, washed with rosy and with dusky centres; under wing-coverts and axillaries dark ochreous brown, washed with crimson; quills below dusky, ashy along the inner edge: "bill brown, the lower mandible greyish; feet reddish grey; iris reddish chestnut" (*A. David*). Total length 5·5 inches, culmen 0·5, wing 3, tail 2·25, tarsus 0·8.

Adult female. Different from the male. General colour above dark ochreous brown, streaked with dusky brown centres to the feathers; the head similarly streaked, but a little darker than the back, the rump and upper tail-coverts nearly uniform; lesser wing-coverts dull ochreous brown; median and greater coverts dusky, edged externally with pale ochreous, especially at the tips, so as to form a double wing-bar; bastard-wing and primary-coverts blackish, edged with ashy ochreous; quills dusky brown, edged with pale ochreous, lighter along the edge of the primaries and towards the end of the secondaries, which are pale-tipped like the greater coverts; tail-feathers dusky brown, edged with ochreous brown; crown of head like the back, but the streaks a little darker; the forehead slightly mottled with pale ochreous buff; lores ashy; a broad eyebrow of ochreous buff, as also the eyelid; ear-coverts dark brown; feathers below the eyes and cheeks ochreous buff, streaked with dark brown; under surface of body ochreous buff, broadly streaked with black on the throat, more narrowly on the fore neck and breast, which are a little browner; abdomen clear ochreous buff, with obsolete dusky shaft-lines; sides of body and flanks dark ochreous brown, with narrow dusky shaft-streaks; thighs ochreous brown; under tail-coverts pale ochreous, with lighter margins and dusky centres; under wing-coverts and axillaries pale ochreous, with dusky bases; quills below dusky, ashy along the inner edge. Total length 5·5 inches, culmen 0·55, wing 3·1, tail 2·3, tarsus 0·9.

Some of the female specimens in the Hume Collection are much

duller ochreous brown below, with very distinct blackish shaft-lines; the throat also whiter. These may be younger birds.

Hab. Himalaya Mountains from Nepal to Bootan, extending into Moupin and Szechuen, in Western China.

a, *b*. ♂ ♀ ad. sk.	Nepal.	Hodgson Coll.
c, *d*. ♀ ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
e. ♀ ad. sk.	Nepal (*B. H. Hodgson*).	Gould Coll.
f, *g*, *h*. ♂ ad.; *i*–*m*. ♀ ad. sk.	Native Sikhim, Jan. 1874–77 (*L. Mandelli*).	Hume Coll.
n, *o*, *p*. ♂ ad. sk.	Native Sikhim, Feb. 1873–74 (*L. Mandelli*).	Hume Coll.
q, *r*. ♂ ad. sk.	Native Sikhim, May 1873–75 (*L. Mandelli*).	Hume Coll.
s. ♂ ad. sk.	Native Sikhim, Aug. 1871 (*L. Mandelli*).	Hume Coll.
t. ♀ ad. sk.	Native Sikhim, Dec. 1875 (*L. Mandelli*).	Hume Coll.
u. ♂ ad. sk.	Sikhim.	W. T. Blanford, Esq. [P.].
v. ♂ ad. sk.	Sikhim (*L. Mandelli*).	Hume Coll. (Type of *P. saturatus*, Blanf.)
w. ♂ ad. sk.	Sikhim, April 1873 (*L. Mandelli*).	Hume Coll.
x. ♀ ad. sk.	Sikhim, May 1873 (*L. Mandelli*).	Hume Coll.
y, *z*. ♂ ♀ ad. sk.	Tongloo, Sikhim, July 1871 (*L. Mandelli*).	Hume Coll.
a'–*d'*. ♂ ad. sk.	Sikhim, Aug. 1873–74 (*L. Mandelli*).	Hume Coll.
e', *f'*, *g'*. ♀ ad. sk.	Sikhim, Aug. 1872–74 (*L. Mandelli*).	Hume Coll.
h'. ♀ ad. sk.	Sikhim, Nov. 1873 (*L. Mandelli*).	Hume Coll.
i'. ♂ ad.; *k'*–*p'*. ♀ ad. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
q', *r'*. ♂ ad. et juv.; *s'*–*v'*. ♀ sk.	Near Darjiling.	Hume Coll.
w'. ♀ ad. sk.	Bootan (*Pemberton*).	India Museum.

19. Carpodacus frontalis.

Fringilla frontalis, *Say in Long's Exped. Rocky Mts.* ii. p. 40 (1824).
Pyrrhula frontalis, *Bp. Amer. Orn.* p. 149, pl. 6. figs. 1, 2 (1825).
Erythrospiza frontalis, *Bp. P. Z. S.* 1837, p. 112; *id. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Jard. ed. Wilson's Amer. Orn.* iii. p. 306, pl. vi. fig. 1; *Audub. B. Amer.* iii. p. 175, pl. 197 (1841); *Gambel, Proc. Philad. Acad.* i. p. 262 (1843).
Carpodacus frontalis, *Gray, Gen. B.* ii. p. 384 (1844); *Bp. Consp.* i. p. 533 (1850); *Baird, B. N. Amer.* p. 415 (1858); *Coues, Ibis*, 1865, p. 159, 1866, p. 267; *Cooper, B. Calif.* p. 156 (1870); *Gray, Hand-l. B.* ii. p. 101, no. 7508 (1870); *Coues, Key N. Amer. B.* p. 129 (1872); *Ridgw. Amer. Journ. Sci. & Arts* (3) v. p. 39 (1873); *Coues, B. N.-West*, p. 188 (1874); *Hensh. Rep. Zool. Exped. 100th Merid.* p. 241 (1875); *Ridgw. Rep. Orn. 40th Parallel*, p. 458 (1877); *Belding, Proc. U. S. Nat. Mus.* i. p. 301

(1879); *Ridgw. op. cit.* iii. pp. 176, 216 (1880); *Coues, Check-list N. Amer. B.* p. 47 (1882); *id. Key N. Amer. B.* 2nd ed. p. 347 (1884); *Drew, Auk*, ii. p. 16 (1885); *Beckh. t. c.* p. 141; *A. O. U. Check-list N. Amer. B.* p. 256 (1886).

Carpodacus rhodocolpus, *Cab. Mus. Hein.* Th. i. p. 166 (1851).

Carpodacus frontalis, var. rhodocolpus, *Ridgw. Amer. Journ. Sci. & Arts* (3) v. p. 39 (1873); *Belding, Proc. U. S. Nat. Mus.* p. 413 (1879); *Cooper, op. cit.* ii. p. 247 (1886).

Carpodacus frontalis, var. frontalis, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 466 (1874).

Carpodacus frontalis rhodocolpus, *Ridgw. Proc. U. S. Nat. Mus.* iii. pp. 176, 216 (1880); *Coues, Check-list N. Amer. B.* p. 48 (1882); *Belding, Proc. U. S. Nat. Mus.* v. pp. 531, 537 (1883); *id. op. cit.* vi. p. 343 (1883); *A. O. U. Check-list N. Amer. B.* p. 257 (1886); *Everm. Auk*, iii. p. 181 (1886); *Hensh. t. c.* p. 453.

Adult male. General colour above light ashy brown, slightly streaked with dark brown mesial lines on the dorsal plumage, which is slightly tinged with rosy; rump with a patch of deep crimson; lesser wing-coverts brown; median and greater coverts dark brown, edged with ashy brown, whitish at the ends; bastard-wing, primary-coverts, and quills dark brown, margined with ashy brown, whitish on the edges of the primaries; upper tail-coverts brown, tinged with rosy and centred with darker brown; tail-feathers brown, edged with whity brown; crown of head brown, very slightly washed with crimson; the forehead and sides of crown bright crimson, forming an eyebrow; lores and nasal plumes ashy white; feathers round eye and ear-coverts brown, with a crimson tinge; fore part of face, cheeks, throat, and breast bright crimson; the abdomen, sides of body, and flanks white, with a slight rosy tinge, all streaked with dusky brown; thighs ashy; under tail-coverts isabelline, broadly streaked with dark brown in the centre; under wing-coverts and axillaries dull reddish, those near the edge of the wing mottled with dusky centres; quills below dusky, ashy along the inner web. Total length 5·2 inches, culmen 0·4, wing 3·1, tail 2·25, tarsus 0·65.

Adult female. Scarcely to be distinguished from the female of *C. mexicanus*, but rather paler brown above, decidedly lighter below, the dark brown streaks less pronounced. Total length 5·6 inches, culmen 0·4, wing 3, tail 2·3, tarsus 0·6.

The transition in a series from *C. frontalis* to *C. rhodocolpus* seems to me to be absolute, and I see no possibility of separating the two forms, even as races. *C. mexicanus* perhaps merges into *C. frontalis*; but I have seen no sign of this in the series of specimens examined.

Hab. Middle Province of the United States, and Pacific coast-region from Oregon to Cape S. Lucas (*cf.* A. O. U. Check-list, pp. 256, 257).

a. Carpodacus frontalis.

a. ♂ ad. sk.	Antelope Island, Great Salt Lake, June 4, 1869 (*R. Ridgway*; Sm. no. 58588).	U. S. National Museum.
b. ♀ ad. sk.	Utah, Oct. 6 (*H. W. Henshaw*; Sm. no. 62937).	Salvin-Godman Coll.

c. ♀ ad. sk.	Santa Rita Mountains, Arizona, July 1, 1884 (*E. W. Nelson*; Sm. no. 99332).	U. S. National Museum [P.].
d. ♀ juv. sk.	Tucson, Arizona, May 20, 1884 (*E. W. Nelson*; Sm. no. 98844).	U. S. National Museum [P.].
e. ♂ ad. sk.	Camp Lowell, Arizona, May 26, 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].

β. Carpodacus rhodocolpus.

a. ♂ ad. sk.	California.	Sclater Coll.
b. ♀ ad. sk.	California.	
c. ♂ ad. sk.	San José, California.	Capt. Kellett and Lieut. Wood [P.].
d. ♀ ad. sk.	Riverside, California, Feb. 23, 1885.	H. K. Coale, Esq. [P.].
e. ♂ ad. sk.	Bear Valley, California, June 21, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
f, g. ♂ ♀ ad. sk.	N. California, May 1885 (*C. N. Townsend*; Sm. nos. 91679–91683).	U. S. Nat. Museum [P.].
h. ♂ ad. sk.	Redwood, California, April 16, 1877 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
i, k. ♂ ♀ ad. sk.	Haywards', California, April 21 1881 (*W. O. Emerson*).	H. K. Coale, Esq. [P.].
l. ♂ ad. sk.	California, July (*H. W. Henshaw*; Sm. no. 72137).	Salvin-Godman Coll.
m. ♀ ad. sk.	Fort Tejon, California, July 16, 1857 (*J. Xantus*; Sm. no. 25593).	Salvin-Godman Coll.
n. ♂ ad. sk.	Fort Tejon, March 4, 1858 (*J. Xantus*; Sm. no. 25601).	Salvin-Godman Coll.
o. Ad. sk.	Mexico?	Sclater Coll.

20. Carpodacus mexicanus.

Bruant de Mexique, *Daubent. Pl. Enl.* vi. pl. 386. fig. 1.

Fringilla mexicana, *P. L. S. Müller, Syst. Nat., Suppl.* p. 165 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 254.

Emberiza mexicana, *Bodd. Tabl. Pl. Enl.* p. 23 (1783); *Gm. Syst. Nat.* i. p. 873 (1788).

Pyrrhula frontalis (*nec Say*), *Swains. Phil. Mag.* new series, p. 435 (1827).

Fringilla hæmorrhoa, *Licht. Preis-Verz. mex. Vög.* p. 2 (1830) (*cf. Cab. J. f. O.* 1863, p. 56); *Wagler, Isis*, 1831, p. 525.

Erythrospiza frontalis, *Bp. Oss. Reg. Anim. Cuv.* p. 80 (1830).

Carpodacus frontalis (*nec Say*), *Bp. & Schl. Monogr. Loxiens*, p. 15, pl. 16 (1850); *Baird, Mex. Bound. Surv.* ii. *Birds*, p. 14 (1858); *Dugès, La Natur.* p. 140 (1868); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 278 (1874).

Carpodacus hæmorrhous, *Sclater, P. Z. S.* 1856, p. 304; *Baird, B. N. Amer.* p. 417, note (1858); *Scl. Cat. Amer. B.* p. 122 (1862); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 550 (1869); *Gray, Hand-l. B.* ii. p. 101, no. 7513 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 236 (1880); *Salv. Cat. Strickl. Coll.* p. 205 (1882).

Carpodacus frontalis, var. hæmorrhous, *Ridgw. Am. Journ. Sci. & Arts*, (3) v. p. 39 (1873).

Carpodacus frontalis, *c.* hæmorrhous, *Coues, B. N.-West*, p. 108 (1874).

Carpodacus mexicanus, *Ridgw. Proc. Biol. Soc.* ii. p. 111 (1884); *Salvin & Godm. Biol. Centr.-Amer., Aves*, i. p. 422 (1886).

Adult male. General colour above ashy brown, nearly uniform, with dusky centres to the feathers; lower back and rump deep crimson; wing-coverts dark brown, with sandy-buff margins, clearer isabelline on the greater coverts; bastard-wing, primary-coverts, and quills dark brown fringed with sandy buff, more ashy on the margins of the primaries and inner secondaries; upper tail-coverts brown, with ashy-brown margins; tail-feathers dark brown, edged with whity brown; crown of head, occiput, nape, and hind neck ashy brown; the forehead deep crimson, extending in a streak on each side above the ear-coverts; lores, feathers round eye, ear-coverts, and sides of face ashy brown; fore part of face, cheeks, throat, and fore neck deep crimson, well defined on the latter; sides of neck and of fore neck ashy brown; remainder of under surface of body ashy whitish, broadly streaked with dark brown; abdomen rather whiter and similarly streaked; sides of body and flanks sandy buff, broadly streaked with dark brown; thighs and under tail-coverts sandy buff, the latter broadly streaked with dusky brown; under wing-coverts and axillaries isabelline, with a slight reddish tinge; quills below dusky, ashy along the inner edge. Total length 5·8 inches, culmen 0·45, wing 3·1, tail 2·45, tarsus 0·7.

Adult female. Different from the male. General colour above brown, slightly mottled with dusky centres to the feathers of the back; lesser wing-coverts like the back; median and greater coverts dark brown, edged with lighter brown; bastard-wing, primary-coverts, and quills blackish brown, edged with paler brown, broader on the secondaries; upper tail-coverts like the back; tail-feathers blackish brown, edged with lighter brown; crown of head like the back, and similarly mottled; lores ashy whitish; ear-coverts uniform dark brown; cheeks and under surface of body ashy whitish, broadly streaked with dusky brown; abdomen uniform ashy whitish; sides of body and flanks streaked with dusky brown like the breast; thighs whitish; under tail-coverts fulvous, with longitudinal centres of dusky brown; under wing-coverts and axillaries pale tawny buff; quills below dusky, ashy along the inner edge. Total length 5·2 inches, culmen 0·45, wing 2·9, tail 2·25, tarsus 0·65.

Hab. Mexico.

a. ♂ var. sk.	Mexico.	Purchased.
b. ♂ ad. sk.	Mexico.	Purchased.
c. ♂ ad. sk.	Valley of Mexico, Nov. 20, 1879 (*A. W. Butler*).	R. B. Sharpe, Esq. [P.].
d. ♀ ad. sk.	Near the city of Mexico.	Salvin-Godman Coll.
e. ♂ ad. sk.	W. Mexico.	Sclater Coll.
f. ♂ ad. sk.	S. Mexico (*A. Sallé*).	Sclater Coll.
g. ♂ ad. sk.	Puebla.	A. Boucard [P.]
h. ♀ ad. sk.	Mexico (*de Saussure*).	Sclater Coll.

21. Carpodacus roseipectus.

Carpodacus frontalis (*nec Say*), *Bp. & Schl. Monogr. Loxiens*, pl. 17 (1850).

Carpodacus hæmorrhous (*nec Wagl.*), *Sclater, P. Z. S.* 1858, p. 303, 1859, p. 380.

Adult male. General colour above dark ashy brown, the feathers of the mantle and back somewhat mottled with dark-brown centres; rump deep crimson: lesser wing-coverts like the back; median and greater coverts dark brown, with a broad ending of paler and more ashy brown; bastard-wing, primary-coverts, and quills blackish brown, fringed with ashy, the inner secondaries more broadly edged with pale brown; upper tail-coverts brown; tail-feathers dark brown, narrowly edged with ashy brown; crown of head uniform dark ashy brown, the forehead deep crimson, passing backwards into a broad eyebrow; nasal plumes whitish; lores, feathers round eye, and ear-coverts uniform ashy brown, like the sides of the neck; cheeks and throat dark crimson, the latter well defined; fore neck and breast ashy brown, all washed with pale rose-colour, and streaked with dusky brown on the lower breast, which is ashy whitish like the abdomen; sides of body and flanks ashy brown, streaked with darker brown; thighs pale ashy brown; under tail-coverts whity brown, washed with rosy, and longitudinally centred with dark brown; under wing-coverts and axillaries pale ashy tinged with rosy; quills below dusky, ashy along the inner edge. Total length 5·5 inches, culmen 0·45, wing 3, tail 2·35, tarsus 0·55.

Adult female. Not distinguished from the female of *C. mexicanus*. Total length 5·6 inches, culmen 0·5, wing 2·9, tail 2·35, tarsus 0·7.

Hab. Southern Mexico.

a–b. ♂ ad. sk.	Oaxaca, W. Mexico (*A. Fenochio*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Oaxaca, Nov. 1860 (*A. Sallé*).	Salvin-Godman Coll.

22. Carpodacus amplus.

Carpodacus amplus, *Ridgw. Bull. U. S. Geol. & Geogr. Surv. Terr.* ii. p. 187 (1876); *id. Proc. U. S. Nat. Mus.* iii. pp. 176, 229 (1880).

Adult. Above, dark brownish grey, the feathers indistinctly darker centrally, the wing- and tail-feathers edged with paler brownish grey. Lower parts dull white, conspicuously streaked with brownish grey.

Male. Frontal band (about 0·15–0·30 wide), superciliary stripe back to the ends of the auriculars, cheeks (anterior half of the maxillary region), chin, throat, breast, and patch on lower part of the rump bright crimson. Wing 3·30–3·35; tail 2·80–2·90; bill, from nostril, 0·42–0·45; depth of bill 0·42–0·50, breadth of bill 0·32–0·35; tarsus 0·80; middle toe 0·60–0·65.

Female. Lacking the red, each feather of the lower parts having a distinct central streak. Wing 3·10–3·25; tail 2·60–2·90; length of bill 0·40–0·45; depth of bill 0·40–0·48, breadth 0·32–0·38; tarsus 0·75–0·85; middle toe 0·58–0·65.

Young. Similar in plumage to the adult female, but light edges to wing- and tail-feathers broader and more inclining to fulvous. (*Ridgway.*)

The upper mandible is nearly black, the lower much lighter, a purplish horn-colour in the male, almost white in the female; the feet are brownish black. In the male the back is just appreciably glossed with a faint red tinge, and the shade of the red markings varies from a deep harsh carmine or true crimson to almost a red-lead hue. The coloration is exactly like that of *C. frontalis* from the Rocky Mountains, except that the tints are all darker; but the size is in every way so much greater that no comparison is needed, as the measurements will demonstrate. (*Ridgway.*)

Hab. Guadelupe Island, Lower California.

23. Carpodacus thura.

Carpodacus thura, *Bp. & Schl. Monogr. Loxiens*, p. 21, pl. 23 (1850); *Bp. Consp.* i. p. 531 (1850); *Gray, Hand-l. B.* ii. p. 101, no. 7519 (1870).

Propasser thura, *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 459 (1856); *Moore, P. Z. S.* 1855, p. 215, pl. 113; *Jerd. B. Ind.* ii. p. 401 (1863); *Hume, Str. F.* 1873, p. 15; *David & Oust. Ois. Chine*, p. 357 (1877); *Hume, Str. F.* 1879, p. 108, 1880, p. 350.

Adult male. General colour above brown, broadly streaked with black centres to the feathers; rump beautiful rose-colour; lesser wing-coverts blackish, edged with rosy at the ends; median coverts blackish, tipped with pale rosy; greater coverts blackish, edged with brown, tinged with rosy on the outer ones, and creamy white towards the ends of the outer webs; bastard-wing, primary-coverts, and quills blackish, edged with dull rosy, the secondaries with brown, the innermost with creamy white like the greater coverts; upper tail-coverts rosy, with black centres, the outer ones brown; tail-feathers blackish, edged with brown; crown of head brown, streaked with black like the back; the forehead rosy, with a pearly gloss, extending backwards in the form of a broad eyebrow, which is succeeded by a broad streak of creamy white above the ear-coverts; lores and feathers below the eye dark crimson; feathers round eye and a broad streak above the ear-coverts dark brown; ear-coverts, cheeks, and throat beautiful rose-colour, with pearly-white centres, giving a streaked appearance; sides of neck uniform brown; remainder of under surface uniform rosy, the fore neck and chest slightly streaked with pearly-white shaft-lines; sides of breast narrowly streaked with black; lower abdomen white; sides of body and flanks brown, streaked with black; thighs ashy brown; under tail-coverts rosy, the long ones edged with white and centred with black; under wing-coverts and axillaries greyish white; edge of wing washed with rosy; quills below dusky, ashy along the inner edge. Total length 7·5 inches, culmen 0·55, wing 3·4, tail 3, tarsus 0·9.

A male, killed in August, is in worn plumage, but retains the same characters as the January specimen described. The stripes on

the mantle and upper back are almost obsolete, those on the lower back very broad; the light edges to the secondaries and greater coverts are nearly lost from abrasion, and from the same cause much of the pearly lustre on the head and throat has disappeared.

Adult female. Different from the male. General colour above brown, all the feathers broadly centred with black; rump golden yellow, streaked with black centres to the feathers; upper tail-coverts dark brown in the centre, edged with whity brown, tinged with golden yellow; lesser wing-coverts dull golden yellow with black centres; median and greater coverts blackish, edged with brown like the back, with whity-brown ends, forming a double wing-band; bastard-wing, primary-coverts, and quills blackish brown, edged with paler brown, the inner secondaries externally whity brown, like the greater coverts; tail-feathers blackish, edged with paler brown; crown of head like the back, and streaked with black in the same way; base of forehead brownish white, streaked with black; lores ashy whitish, as well as the feathers below the eye and the lower edge of eyelid; a distinct eyebrow of pale rufous, narrowly streaked with black; feathers round eye, remainder of eyelid, and ear-coverts blackish brown; cheeks buffy whitish, tinged with rufous and streaked with black; throat, fore neck, and chest rufous, narrowly streaked with black; breast whiter, with a slight tawny tinge, streaked with black; abdomen purer white and with narrower black streaks; sides of body and flanks brown, tinged with rufous and streaked with black; thighs ashy brown; under tail-coverts yellowish buff with black centres; under wing-coverts and axillaries white, the edge of the wing pale rufous; quills below dusky, ashy along the inner edge. Total length 6·5 inches, culmen 0·5, wing 3·25, tail 2·85, tarsus 0·9.

Very little variation occurs in the plumage of the female birds; but in summer they are rather whiter on the sides of the face and underparts. The depth of colour on the rump is more intense in some specimens; and in one from Native Sikhim, procured in March, the rump has a shade of glossy vinous. Although marked as a "female," it is not improbably a young male. Two young males, shot in October, are of a paler rose-colour below than the fully adult birds, and still retain traces of the striped breast, showing that the first stage of the male is like that of the old hen birds, as might have been expected. A young bird in the Gould Collection also has bright-coloured upper tail-coverts, like the specimen above mentioned, and has at the same time some rosy colour on the throat.

Hab. Himalayas, from Nepal to Sikhim and Thibet, extending into Western China.

a, *b*. ♂ ♀ ad. sk.	Nepal.	Hodgson Coll.
c, *d*, *e*, *f*. ♂ ad.; *g*, *h*, *i*, *k*. ♀ ad. sk.	Dolaka, Nepal, Jan. 1876 (*L. Mandelli*).	Hume Coll.
l, *m*. ♂ ad. sk.	Dolaka, Nepal, Aug. 1876 (*L. M.*).	Hume Coll.
n, *o*, *p*, *q*, *r*. ♂ ad. sk.	Native Sikhim, Mar. 1874 (*L. M.*).	Hume Coll.
s, *t*, *u*, *v*. ♀ ad. sk.	Native Sikhim, Mar. 1874 (*L. M.*).	Hume Coll.
w, *x*. ♂ ♀ ad. sk.	Native Sikhim, May 1875 (*L. M.*).	Hume Coll.

y. ♂ ad. sk.	Native Sikhim, June 1878 (*L. M.*).	Hume Coll.
z. ♂; *a'*. ♀ ad.; *b'*. ♂ imm. sk.	Native Sikhim, Oct. 1873 (*L. M.*).	Hume Coll.
c', *d'*. ♂ ♀ ad. sk.	Native Sikhim, Nov. 1876 (*L. M.*).	Hume Coll.
e'. ♂ ad. sk.	Native Sikhim, Dec. 1879 (*L. M.*).	Hume Coll.
f'. ♂ ad. sk.	Interior of Sikhim, June 1873 (*L. M.*).	Hume Coll.
g', *h'*. ♀ ad. sk.	Interior of Sikhim, Oct. 1873 (*L. M.*).	Hume Coll.
i'. ♂ ad. sk.	Sikhim, Jan. 1873 (*L. M.*).	Hume Coll.
k', *l'*. ♀ ad. sk.	Sikhim, March 1873 (*L. M.*).	Hume Coll.
m', *n'*, *o'*. ♀ ad. sk.	Sikhim, June 1873 (*L. M.*).	Hume Coll.
p', *q'*, ♂ ad. sk.	Sikhim, Aug. 1873 (*L. M.*).	Hume Coll.
r'. ♀ ad. sk.	Sikhim, Aug. 1873 (*L. M.*).	Hume Coll.
s', *t'*. ♂ ♀ ad. sk.	Sikhim, 1879 (*L. M.*).	Hume Coll.
u'. ♀ ad. sk.	Sikhim, (*J. Gammie*).	Hume Coll.
v'. ♂ juv. sk.	Sikhim (*J. G.*).	Hume Coll.
w'. ♂ ad. sk.	Tongloo, Sikhim, Dec. 1879 (*L. M.*).	Hume Coll.
x', *y'*. ♂ ♀ ad. sk.	Darjiling.	Hume Coll.
z'. ♂ ad. sk.	Darjiling, winter 1869–70 (*H. J. Elwes*).	Hume Coll.
α, *β*. ♀ ad. sk.	Darjiling, April 1869.	Hume Coll.
γ. ♂ ad. sk.	Darjiling, Oct. 1868.	Hume Coll.
δ. Juv. sk.	Darjiling.	Gould Coll.
ε, *ζ*. ♂ ♀ ad. sk.	Thibet, March 1875 (*L. Mandelli*).	Hume Coll.

24. Carpodacus dubius.

Propasser frontalis (*nec Say*), *Blyth*, *Ibis*, 1862, p. 390; *id. J. A. S. Beng.* xxxii. p. 458 (1863); *Jerd. B. Ind.* ii. p. 403 (1863), iii. App. p. 87 (1864); *Hume*, *Str. F.* 1878, vol. ii. p. 459; *id. Str. F.* 1879, p. 108; *G. F. L. Marshall*, *Ibis*, 1881, p. 84.

Carpodacus dubius, *Prjev. in Rowley's Orn. Misc.* ii. p. 301, pl. liii. (1877).

Propasser dubius, *David & Oust. Ois. Chine*, p. 552 (1877).

Propasser blythi, *Biddulph*, *Ibis*, 1882, p. 283, pl. 19.

Adult male. General colour above light brown, all the feathers of the back streaked with dark brown, with slightly paler edges; lower back, rump, and upper tail-coverts beautiful clear rose-colour, the latter with brown bases and central streaks; lesser wing-coverts dark brown washed with crimson; median coverts blackish brown, tipped with rosy; greater coverts blackish brown, edged with paler rosy brown, whitish at the ends of the outer web; bastard-wing, primary-coverts, and quills dark brown, edged with light brown like the back, slightly tinged with rosy, the secondaries paler on the margins, which are whitish at the ends of the innermost; tail-feathers dark brown, fringed with lighter brown; crown of head like the back, and similarly streaked with dark brown; a broad frontal band of most beautiful pearly silver plumes, continued backwards over the eye, where it becomes mixed with rose-colour, and terminates in a broad streak of whitish on each side of the occiput; lores and a narrow line across the base of the forehead deep crimson; ear-coverts deep rose-colour, slightly spangled with pearly white;

cheeks and throat rose-colour, with lanceolate spangles of pearly white, becoming narrower on the fore neck and chest, where they form glistening shaft-lines; breast and under surface of body generally rich rose-colour; abdomen white, streaked with blackish on the upper parts; sides of body and flanks light brown, the rose-colour of the breast, however, descending on each side of the white abdomen; thighs light brown; under tail-coverts rose-colour, the longer ones longitudinally centred with blackish; under wing-coverts and axillaries whitish; quills below dusky ashy, slightly tinged with rosy along the inner edge. Total length 6·6 inches, culmen 0·45, wing 3·3, tail 2·9, tarsus 0·9.

Hab. From Alachan and Kansu, probably throughout Thibet, as it re-occurs in the North-western Himalayas.

a. ♂ ad. sk.	Kansu, April.	General Prjevalski [C.].
b. ♂ ad. sk.	N.W. Himalayas.	Gould Coll.
c. ♂ ad. sk.	N.W. Himalayas, Junglag, Dec. 1847.	Gould Coll.

25. Carpodacus ambiguus. (Plate X.)

Propasser ambiguus, *Hume, Str. F.* 1874, p. 326; *Brooks, Str. F.* 1875, p. 255; *Hume, Str. F.* 1879, p. 108.

Adult male (type of species). General colour above dull brown, the feathers centred with blackish, the pale edges to the feathers more distinct on the mantle and upper back; the rump uniform pale rosy; lesser wing-coverts dark brown; median and greater coverts dark brown, edged with pale brown which is tinged with rosy, less distinct on the greater coverts; bastard-wing and primary-coverts uniform dark brown; quills dark brown, edged with paler brown; upper tail-coverts and tail-feathers dark brown, with paler brown edges, narrower on the latter; crown of head blackish, with a faint tinge of crimson; lores and a tolerably distinct eyebrow dark crimson; feathers round eye, sides of face, and ear-coverts dark crimson, as also the cheeks and throat; remainder of under surface pale rose-colour, with dusky shaft-streaks, the feathers of the fore neck and chest slightly washed with crimson; sides of the body and flanks rather more broadly streaked with blackish brown; thighs ashy brown; under tail-coverts pale rosy; under wing-coverts and axillaries ashy whitish, washed with rosy; quills below dusky, ashy whitish along the inner edge. Total length 5·5 inches, wing 3, tail 2·1.

Adult female. Different from the male. General colour above pale brown, with broad blackish-brown centres to the feathers, the rump not so strongly centred with blackish, but the upper tail-coverts like the back; lesser wing-coverts dark brown; median and greater coverts blackish brown, edged with paler brown, whity brown at the ends of the feathers; bastard-wing, primary-coverts, quills, and tail-feathers blackish brown, edged with paler brown;

crown of head like the back and similarly streaked with black; the base of the forehead minutely varied with whitish streaks; lores dusky; a whitish eyebrow, streaked narrowly with blackish; sides of face whitish, streaked with dark brown; the ear-coverts uniform pale brown, streaked with dusky brown; cheeks and under surface of body whitish with a fulvous tinge, the throat narrowly streaked with blackish, becoming broader on the fore neck and breast; the abdomen uniform whitish; sides of body and flanks washed with brown and broadly streaked with blackish; thighs whitish, streaked with dark brown; under tail-coverts whitish, brown in the centre of the long ones, all with blackish shaft-streaks; under wing-coverts and axillaries pale brown, with a tawny tinge on the latter; quills below dusky, ashy along the inner edge. Total length 5·3 inches, culmen 0·4, wing 2·9, tail 2·4, tarsus 0·75.

Hab. Himalaya Mountains, from the neighbourhood of Masuri to Nepal.

a, b. ♀ ad. sk.	Nepal.	Hodgson Coll.
c–d. ♂ ♀ ad. sk.	Baghirati Valley.	Hume Coll. (Types of species.)
e, f. ♀ ad. sk.	Near Suki, Masuri Hills, May 1874 (*W. E. Brooks*).	Hume Coll.
g, h. ♀ ad. sk.	Above Derali, May 20, 1874 (*W. E. B.*).	Hume Coll.
i. ♀ ad. sk.	Derali, May 13, 1874 (*W. E. B.*).	Hume Coll.

26. Carpodacus pulcherrimus.

Propasser pulcherrima *vel* rhodochroa, *Hodgs. Icon. ined.* pl. 301 (fig. 467)*; *id. in Gray's Zool. Misc.* p. 85 (1844).

Propasser pulcherrimus, *Moore, P. Z. S.* 1855, p. 216; *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 460 (1856); *Jerd. B. Ind.* ii. p. 462 (1863); *Hume, Nests & Eggs Ind. B.* p. 471 (1873); *id. Str. F.* 1874, p. 317; *id. Str. F.* 1879, p. 108.

Carpodacus pulcherrimus, *Gray, Hand-l. B.* ii. p. 102, no. 7521 (1870).

Carpodacus davidianus, *Milne-Edwards, Nouv. Arch.* i. *Bull.* p. 19, pl. ii. fig. 2 (1864); *Gray, Hand-l. B.* ii. p. 101, no. 7517 (1870); *Swinh. P. Z. S.* 1871, p. 387.

Propasser davidianus, *David & Oust. Ois. Chine,* p. 354, pl. 95 (1877).

Adult male. General colour above ruddy brown, streaked with black centres, the mantle rather more ashy; rump clear rosy; lesser wing-coverts ruddy brown; median and greater coverts dusky brown, edged with lighter brown, rather rosy towards the ends; bastard-wing, primary-coverts, and quills dark brown, edged with

* Figs. 465, 466, on the same plate, are males of true *P. rhodochrous*, the female (no. 467) being a hen of the present bird. Among Hodgson's specimens numbered "467" were also some females of *P. ambiguus*. The species will stand as *P. pulcherrimus* of Moore (*ut suprà*), who has adopted Hodgson's name from the female bird, and it seems better to retain it now, as the species is fully recognized by ornithologists.

dull rosy, and with ruddy brown on the secondaries, the inner ones being edged with ashy whitish near the tip; upper tail-coverts brown tinged with rosy, centred with black; tail-feathers dark brown, edged with ruddy brown; crown of head like the back and similarly streaked with black, but a little more tinged with rosy; lores dusky; base of forehead and eyebrow pale rosy with a pearly gloss, streaked with black on the anterior portion of the eyebrow; ear-coverts, sides of face, and cheeks rosy with a pearly gloss, surmounted by a dark-brown stripe above the ear-coverts; throat and under surface of body rosy, with a pearly gloss on the throat and fore neck, with black shaft-lines; the breast and abdomen with crimson reflexions, the latter uniform; sides of body and flanks brown, streaked with black; thighs brown; under tail-coverts rosy, streaked with black, the long ones edged with whitish at the tips; under wing-coverts rosy, centred with black, the longer ones whitish; axillaries pale rosy; quills below dusky, ashy along the inner edge. Total length 7·5 inches, culmen 0·45, wing 3·05, tail 2·4, tarsus 0·7.

Adult female. Different from the male. General colour above ruddy brown, streaked with black centres to the feathers; lesser wing-coverts like the back; median and greater series blackish, margined with light reddish brown, paler at the tips of the feathers; bastard-wing, primary-coverts, and quills blackish, edged with brown, the inner secondaries with pale reddish brown like the greater coverts; rump a little more uniform than the back, but the upper tail-coverts ruddy brown with black centres; tail-feathers dark brown, margined with paler brown; crown of head like the back, and streaked with black in the same manner; on each side of the crown an eyebrow of creamy white, narrowly streaked with black; this light streak commencing above the eye and extending to the sides of the occiput; sides of face, ear-coverts, and cheeks pale tawny buff streaked with black, with a broad line of dark brown along the upper edge of the ear-coverts: throat and under surface of body pale tawny buff, paler on the throat and whiter on the lower abdomen, which is the only part which is not distinctly streaked with black; thighs brown; under tail-coverts pale tawny buff, whiter at the ends, with blackish centres; axillaries and under wing-coverts pale tawny buff, with ashy bases; quills dusky below, ashy along the base of the inner web. Total length 5·5 inches, culmen 0·45, wing 3, tail 2·2, tarsus 0·7.

Hab. Himalaya from Kumaon to Sikhim, and thence to Western China.

a. ♂ ad. sk.	Himalayas.	Gould Coll.
b. ♂ ad. sk.	Kumaon (*Strachey*).	India Museum.
c. ♂ ad. sk.	Dolaka, Nepal, Dec. 1875 (*L. Mandelli*).	Hume Coll.
d, e. ♂ ad.; *f–l.* ♀ ad. sk.	Dolaka, Nepal, Jan. 1875 (*L. Mandelli*).	Hume Coll.
m, n. ♂ ♀ ad. sk.	Dolaka, Nepal, Feb. 1876 (*L. Mandelli*).	Hume Coll.

o, *p*. ♂; *q*, *r*. ♀ ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
s, *t*. ♂ ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
u. ♂ ad. sk.	Native Sikkim, Jan. 1875.	Hume Coll.
v. ♂ ad. sk.	Native Sikhim, April 1875.	Hume Coll.
w. ♂ ad. sk.	Kansu, April.	Gen. Prjevalski [C.].

45. PYRRHOSPIZA.

	Type.
Pyrrhospiza, *Hodgs. J. A. S. Beng.* xiii. p. 953 (1844) ..	P. punicea.
Linurgus, *Reichenb. Syst. Av.* Taf. lxxviii. fig. 9 (1850, *nec* Ligurinus)	P. olivacea.

Range. Himalaya Mountains, extending to Kan-su; Cameroons Mountains in Western Africa.

Key to the Species.

a. With red in the plumage; no black on the head { *punicea*, p. 431. / *humii*, p. 433. / *longirostris*, p. 433.

b. With yellow in the plumage; head and throat black..... *olivacea*, p. 434.

1. Pyrrhospiza punicea.

Carpodacus subroseus, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 306 (no. 831).

Pyrrhospiza punicea, *Hodgs. J. A. S. Beng.* xiii. p. 953 (1844); *Blyth, Cat. B. Mus. As. Soc.* p. 121 (1849); *id. J. A. S. Beng.* xxiii. p. 214 (1854); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 461 (1856); *Jerd. B. Ind.* ii. p. 406 (1863); *Blyth, Ibis*, 1867, p. 44; *Hume, Str. F.* 1879, p. 108.

Propyrrhula rubeculoides, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. P. Z. S.* 1845, p. 36.

Strobilophaga rubeculoides, *Gray, Gen. B.* ii. p. 18 (1849).

Strobilophaga caucasica (*nec Pall.*), *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 110 (1846).

Carpodacus puniceus, *Bp. & Schl. Monogr. Loxiens*, p. 25, pls. 27, 28 (1850); *Bp. Consp.* i. p. 530 (1850).

Pinicola punicea, *Gray, Hand-l. B.* ii. p. 109, no. 7643 (1870).

Adult male. General colour above dark brown, mottled all over with blackish centres to the feathers; scapulars like the back; rump bright rose-colour; lesser wing-coverts like the back, but washed with reddish; median and greater coverts dark brown, edged with rather paler brown, the greater series slightly washed with reddish brown; bastard-wing, primary-coverts, and quills dark brown, narrowly margined with ashy brown, a little lighter on the edges of the primaries; upper tail-coverts rather lighter brown; tail-feathers dark brown, edged with lighter brown; crown of head like the back, and similarly mottled with blackish centres to the feathers; a broad frontal band of crimson; lores dusky, tipped with crimson; eyebrow crimson,

extending to above the middle of the ear-coverts; eyelid dusky blackish; ear-coverts dark brown, streaked with blackish like the crown; cheeks and feathers below the eye crimson, with silvery-white bases; throat, fore neck, and breast crimson, with silvery-white centres to the feathers and blackish bases, the breast rather duller coloured than the throat; abdomen earthy brown, the feathers centred with black; sides of breast, sides of body, and flanks dark brown, with blackish centres to the feathers; thighs earthy brown, mottled with black; under tail-coverts rosy, paler on the edges, with dark-brown centres; under wing-coverts ashy brown, centred with blackish and washed with rosy, especially on the edge of the wing; axillaries yellowish brown, dusky on the inner web; quills below dusky, ashy along the inner edge. Total length 7·5 inches, culmen 0·6, wing 4·4, tail 3, tarsus 0·95.

Adult female. Different from the male. General colour above dark ashy brown with an olive tinge, with blackish centres to the feathers, broader and more distinct on the mantle; the rump rather paler and more olive, the blackish centres to the feathers narrower: wing-coverts and quills dark brown, with paler brown edges to the feathers, especially on the greater coverts; upper tail-coverts like the rump; tail-feathers dark brown, edged with lighter brown; crown of head like the back, and similarly streaked with black; lores dusky, tipped with ochreous buff, as also the feathers of the forehead; eyebrow and feathers round the eye ochreous buff, streaked with black; ear-coverts with rather broader black centres to the feathers; cheeks and under surface of body ochreous buff, the throat broadly streaked with black; the fore neck and chest with strongly marked spots of black, the lower breast and abdomen more narrowly streaked with black, the latter rather ashy brown; sides of body and flanks ashy brown, with broad black centres to the feathers; thighs and under tail-coverts ashy brown, with pale edges and blackish centres to the feathers; under wing-coverts and axillaries ochreous buff, with ashy-brown bases; quills below dusky, more ashy along the inner edge. Total length 6·5 inches, culmen 0·65, wing 4, tail 2·7, tarsus 0·9.

The series of male birds in the Hume Collection shows the species at every season of the year, and there is little variation between winter and summer plumage. The male shot in December is rather lighter brown, with the blackish mesial markings rather more strongly indicated; the forehead has the crimson feathers tipped with dark brown, and there are pale brown tips to the rosy feathers of the rump and to some of the breast-feathers. Remains of these brown tips are found in many of the breeding birds, in which the feathers become more or less abraded, so that in some examples the silvery-white centres to the crimson feathers of the underparts become entirely worn out, and a more uniform appearance results.

The females vary little at different seasons of the year, but they are rather lighter in colour during the winter, especially about the head, which is more ashy than the back and the forehead; sides of

face and ear-coverts ashy ochreous buff, with very distinct blackish streaks.

The *young males* only differ from the adult females in having the rump yellow and in the strong shade of olive-yellow which pervades the throat and breast, while the fore neck and breast have large black triangular spots. Total length 6·5 inches, culmen 0·65, wing 4·1, tail 2·85, tarsus 0·9.

Hab. Himalayas, from Nepal to Sikhim.

a, b. ♂; *c.* ♀ ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
d. ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
e. ♀ ad. sk.	Native Sikhim, Jan. 1873 (*L. Mandelli*).	Hume Coll.
f, g, h. ♂; *i.* ♀ ad.; *k.* ♂ juv. sk.	Native Sikhim, March (*L. M.*).	Hume Coll.
l, m. ♂ ♀ ad. sk.	Native Sikhim, April (*L. M.*).	Hume Coll.
n, o. ♂; *p.* ♀ ad. sk.	Native Sikhim, May (*L. M.*).	Hume Coll.
q, r. ♂ ad. et juv. sk.	Native Sikhim, July (*L. M.*).	Hume Coll.
s, t, u. ♂ ad. sk.	Native Sikhim, Aug. (*L. M.*).	Hume Coll.
v. ♂ ad. sk.	Native Sikhim, Sept. (*L. M.*).	Hume Coll.
w. ♀ ad.; *x.* ♂ juv. sk.	Native Sikhim, Nov. (*L. M.*).	Hume Coll.
y. ♂ ad.; *z, a', b'.* ♀ ad. sk.	Native Sikhim, Dec. (*L. M.*).	Hume Coll.
c'. ♂ ad. sk.	Sikhim.	Hume Coll.
d', e'. ♂ ♀ ad. sk.	Sikhim, April 1873.	Hume Coll.
f'. ♀ ad. sk.	Darjiling, April.	Hume Coll.

Subsp. *a.* **Pyrrhospiza humii.**

Pyrrhospiza punicea (*nec Hodgs.*), *Biddulph, Ibis*, 1881, p. 85; *Marshall, Ibis*, 1884, p. 420.

Adult male. Much paler brown than the Sikhim *P. punicea*, the rose-colour of the rump, face, throat, and breast also much paler, and not crimson; frontal band rosy and much broader than in *P. punicea*. Total length 7 inches, culmen 0·65, wing 4·35, tail 3·1, tarsus 0·9.

Hab. Interior of N.W. Himalayas.

a. ♂ ad. sk.	Kotegurh, April 3, 1869.	Hume Coll.
b. ♂ ad. sk.	"Borenda Pass."	Gould Coll.
c. ♂ ad. sk.	Thibet.	Gould Coll.

2. **Pyrrhospiza longirostris.**

Pyrrhospiza longirostris, *Prjev. in Rowley's Orn. Misc.* ii. p. 304, pl. liv. (1877).

Male. Forehead, wide eyebrows, cheeks, and throat blood-red, with indistinct silvery spots; breast and rump crimson; ear-coverts, crown, nape, back and sides of neck, back, and shoulders earthy-brown colour, the darker centres of the feathers forming indistinct spots; stomach dirty yellow; flanks yellowish grey, with indistinct dark lines; quills and tail dark brown, with hardly perceivable red edges on the outer webs; the secondaries have white tips; the upper

wing-coverts do not differ from the quills in their coloration, the larger ones have pale edges and the smaller ones have red ones; the frontal part of the upper tail-coverts is brown, the under tail-coverts are rose-coloured; culmen dark horn-colour, lower mandible yellow; iris dark brown; tarsus dark horn-colour. Length 8·5 to 9 inches, wing 4·49 to 4·88, tail 3·52 to 3·7, culmen 0·7 to 0·78, tarsus 0·9 to 0·97. (*Prjevalski.*)

Female. Upper parts of the body, wings, and tail like the male; forehead and underparts of the body yellowish dirty white, with many dark spots, which latter get longer on the breast and disappear on the stomach; rump yellowish. Wing 4·5 to 4·7, tail 3·47 to 3·5, culmen 0·67, tarsus 0·96. (*Prjevalski.*)

Hab. Kansu.

General Prjevalski does not state how this species differs from *P. punicea*, and apparently bases the distinctions on the length of the bill. This varies, however, to a great extent in *P. punicea*, and we believe that the two species are identical.

3. Pyrrhospiza olivacea.

Coccothraustes olivaceus, *Fraser, P. Z. S.* 1842, p. 144; *Allen & Thomps. Exp. Niger,* ii. p. 500 (1848); *Fraser, Zool. Typ.* pl. 47 (1849).

Ligurnus olivaceus, *Hartl. Orn. W.-Afr.* p. 140 (1857); *Gray, Ann. & Mag. Nat. Hist.* (3) x. p. 445 (1862).

Crithagra olivacea, *Gray, Hand-l. B.* ii. p. 101, no. 7505 (1870).

Ligurinus olivaceus, *Sharpe, P. Z. S.* 1871, p. 615; *Reichen. J. f. O.* 1875, p. 50.

Adult male. General colour above yellowish green, clearer yellow on the lower back, rump, and upper tail-coverts; lesser and median coverts like the back; greater coverts blackish, externally yellowish green, and broadly tipped with yellow; bastard-wing, primary-coverts, and quills black, edged with yellow, broader on the secondaries, which are margined with white along the inner web; centre tail-feathers olive-green, the remainder olive-brown, edged and tipped with yellow, the inner webs yellow towards the end; crown of head black, separated from the back by a broad band of bright yellow; lores, sides of face, and throat black; remainder of under surface of body golden yellow, a little greener on the flanks and thighs; under wing-coverts and axillaries yellow; quills below dusky, ashy along the inner edge of the primaries, white on the secondaries. Total length 5·6 inches, culmen 0·55, wing 2·9, tail 1·9, tarsus 0·7.

Adult female. Much greener than the male, and only slightly yellower on the rump and upper tail-coverts; the head dingy blackish, as also the sides of the face and throat, the latter washed with olive; fore neck, breast, and sides of the body greenish, yellow in the centre of the breast and abdomen; wings and tail as in the male. Total length 5 inches, culmen 0·5, wing 2·65, tail 1·85, tarsus 0·7.

Young birds resemble the old female, but have the head greenish,

like the back, the throat yellowish, and the whole coloration more dingy.

Hab. Cameroons Mountains, W. Africa; Fernando Po.

a. [♀] ad. sk.	Fernando Po.	L. Fraser [C.]. . (Type of species.)
b. ♂ ad.; *c.* ♂ imm.; *d, e.* ♀ ad.; *f, g.* Juv. sk.	Cameroons Mountains, 7000 feet.	Sir R. Burton [P.].

46. LOXIA.

Type.

Loxia, *Linn. Syst. Nat.* i. p. 299 (1766, pt.) ..... L. curvirostra.
Crucirostra, *Leach, Cat. Mamm. &c.* p. 12 (1816) .... L. curvirostra.
Curvirostra, *Brehm, Ornis*, iii. p. 85 (1827) ..... L. curvirostra.
Cf. *Brehm, Naum.* 1853, pp. 178–203, 241–256, cum tab.

Range. The greater portion of the Palæarctic and Nearctic regions, reaching to the Himalayas in the Old World and to Mexico in the New World.

Key to the Species.

a. With no white bands on the wings ..... *curvirostra* and allies, pp. 435–439.
b. With white bands on the wings ..... *bifasciata*, p. 442. / *leucoptera*, p. 443.

1. Loxia curvirostra.

The Cross-bill, *Albin, Nat. Hist. B.* i. p. 58, pl. 61 (1738).
The Cross-bills, cock and hen, *Edwards, Gleanings*, ii. p. 196, pl. 303 (1760).
Loxia curvirostra, *Linn. Syst. Nat.* i. p. 299 (1766); *Bechst. Orn. Taschenb.* p. 105 (1802); *Schinz, Vög. Schweiz.* p. 68 (1815); *Temm. Man.* i. p. 328 (1820); *Naum. Vög. Deutschl.* iv. Taf. 110. figs. 1–4 (1824); *Roux, Orn. Prov.* pls. 70, 71; *Audub. B. Amer.* pl. 197; *Werner, Atlas, Granivores*, pl. 44 (1827); *Less. Traité*, p. 451 (1831); *Audub. Orn. Biogr.* ii. p. 559 (1834), v. p. 511 (1839); *Jard. ed. Wils. Amer. Orn.* ii. p. 37, pl. 31. figs. 1, 2 (c. 1832); *Gould, B. Eur.* iii. pl. 202 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 38 (1838); *Crespon, Orn. Gard*, p. 235 (1840); *Keys. u. Blas. Wirb. Eur.* p. 164 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 165 (1840); *Audub. B. Amer.* 8vo, iii. p. 186, pl. 200 (1841); *Selys-Longch. Faune Belge*, p. 75 (1842); *Yarr. Brit. B.* ii. p. 15 (1843); *Schl. Rev. Crit.* p. 68 (1844); *Giraud, B. Long Isl.* p. 130 (1844); *Gray, Gen. B.* ii. p. 388 (1845); *Blyth, Cat. B. Mus. As. Soc.* p. 123 (1849); *Thomps. B. Irel.* i. p. 276 (1849); *Bp. Consp.* i. p. 527 (1850); *id. & Schl. Monogr. Loxiens*, p. 5, pl. 6 (1850); *Cab. Mus. Hein.* Th. i. p. 168 (1850); *Middend. Reis. Sibir., Zool.* p. 154 (1851); *Kjærb. Orn. Dan.* pl. 28 *b.* fig. 4, pl. 28 *c.* figs. 7, 8 (1852); *Licht. Nomencl. Av. Berol.* p. 48 (1854); *Schl. Vog. Nederl.* pl. 176; *Hewits. Eggs Brit. B.* i. p. 212, pl. 54. figs. 2, 3 (1856); *Sundev. Svensk. Fogl.* pl. i. figs. 3, 4 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 123 (1859); *Salvin, Ibis*, 1859, p. 315; *Schrenk, Reis. Amurl.* p. 301 (1859); *Linderm. Vög. Griechenl.* p. 64 (1860); *Powys, Ibis*, 1860, p. 138; *Schl. Dier. Nederl.* pl. 17. figs. 7, 8, 9 (1861); *Swinh. Ibis*, 1861, p. 336; *Gray, List Brit. B.* p. 110 (1863); *Radde, Reis. Sibir., Vög.*

p. 194 (1863); *Wright, Ibis,* 1864, p. 50; *More, Ibis,* 1865, p. 130; *Lilford, Ibis,* 1866, p. 388; *Degl. et Gerbe, Orn. Eur.* i. p. 261 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 161 (1867); *Swinh. Ibis,* 1868, p. 446; *Borggr. Vogelf. Norddeutschl.* p. 78 (1869); *Malmgr. Ibis,* 1869, p. 230; *Elwes & Buckley, Ibis,* 1870, p. 193; *Fritsch, Vög. Eur.* pl. 22. fig. 8 (1870); *Gould, B. Gt. Brit.* iii. pl. 45 (1870); *Gray, Hand-l. B.* ii. p. 108, no. 7632 (1870); *Salvad. Faun. Ital., Ucc.* p. 163 (1871); *Saunders, Ibis,* 1871, p. 220; *R. Gray, B. West Scotl.* p. 153 (1871); *Keulem. Onze Vog.* ii. pl. 42 (1872); *Harting, Handb. Brit. B.* p. 29 (1872); *Dresser, B. Eur.* iv. p. 127, pl. 203 (1872); *Elwes, P. Z. S.* 1873, p. 647; *Alst. & Harvie Brown, Ibis,* 1873, p. 65; *Brooke, t. c.* p. 247; *Irby, B. Gibr.* p. 124 (1875); *Cordeaux, Ibis,* 1875, p. 183; *Danf. & Harvie Brown, t. c.* p. 414; *Fallon, Ois. Belg.* p. 92 (1875); *Taez. Bull. Soc. Zool. France,* i. p. 183 (1876); *Seebohm, Ibis,* 1880, p. 107, 1882, pp. 219, 378; *Salvin, Cat. Strickl. Coll.* p. 202 (1882); *B. O. U. List Brit. B.* p. 57 (1883); *Booth, Rough Notes,* vol. i. pl. 77; *Seebohm, Hist. Brit. B.* ii. p. 31 (1884); *Saunders, Ibis,* 1884, p. 376; *Radde, Orn. Cauc.* p. 162 (1884); *Whitehead, Ibis,* 1885, p. 40; *Seebohm, Ibis,* 1886, p. 25; *Giglioli, Avif. Ital.* p. 42 (1886); *Salvad. Elench. Ucc. Ital.* p. 181 (1887).

Le Bec-croisé d'Allemagne, *Daubent. Pl. Enl.* iv. pl. 218.

Le Bec-croisé, *Buff. Hist. Nat. Ois.* iii. p. 449, pl. 27. fig. 2 (1775).

Loxia curvirostra, var. γ, *Gm. Syst. Nat.* i. p. 327 (1788).

Common Crossbill, *Lath. Gen. Syn.* ii. pt. i. p. 106 (1783).

Curvirostra americana, *Wils. Amer. Orn.* iv. p. 44, pl. 31. figs. 1, 2 (1811); *Baird, B. N. Amer.* p. 426 (1856); *Dall & Bann. Trans. Chicago Acad.* i. p. 281 (1869); *Cooper, B. Calif.* p. 148 (1870); *Coues, Key N. Amer. B.* p. 129 (1872).

Loxia pytiopsittacus, *Bechst. Orn. Taschenb.* p. 106 (1802); *Temm. Man. d'Orn.* p. 327 (1820); *Naum. Vög. Deutschl.* iv. pl. 109. figs. 1–3 (1824); *Werner, Atlas, Granivores,* pl. 43 (1827, ♀); *Gould, B. Eur.* iii. pl. 201 (1837); *Macgill. Brit. B.* i. p. 429 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 38 (1838); *Keys. u. Blas. Wirb. Eur.* p. 164 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 188 (1840); *Yarr. Brit. B.* iii. p. 34 (1843); *Schl. Rev. Crit.* p. 67 (1844); *Gray, Gen. B.* ii. p. 388 (1845); *Bp. Consp.* i. p. 526 (1850); *id. & Schl. Monogr. Loxiens,* p. 3, pl. 1 (1850); *Cab. Mus. Hein.* Th. i. p. 168 (1850); *Kjærb. Orn. Dan.* pl. 28 *b.* fig. 3, pl. 28 *c.* figs. 5, 6 (1852); *Schl. Vog. Nederl.* pl. 175 (1854); *Licht. Nomencl. Av. Berol.* p. 48 (1854); *Sundev. Svensk. Fogl.* pl. i. figs. 1, 2 (1860); *Linderm. Vög. Griechenl.* p. 63 (1860); *Schl. Dier. Nederl. Vog.* pl. 17. figs. 5, 6 (1861); *Gray, List Brit. B.* p. 111 (1863); *Radde, Reis. Sibir.* p. 194 (1863); *Degl. et Gerbe, Orn. Eur.* i. p. 263 (1867); *Borggr. Vogelf. Norddeutschl.* p. 77 (1869); *Gray, Hand-l. B.* ii. p. 108, no. 7633 (1870); *Fritsch, Vög. Eur.* Taf. 19. fig. 10, Taf. 22. fig. 9 (1870); *Gould, B. Gt. Brit.* iii. pl. 46 (*c.* 1870); *Salvad. Faun. Ital., Ucc.* p. 162 (1871); *R. Gray, B. West Scotl.* p. 154 (1871); *Harting, Handb. Brit. B.* p. 114 (1872); *Dresser, B Eur.* iv. p. 121, pl. 202 (1872); *Fallon, Ois. Belg.* p. 91 (1875); *Newton, ed. Yarr. Brit. B.* ii. p. 207 (1877); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 236 (1880); *Gigl. Ibis,* 1881, p. 204; *Seebohm, Ibis,* 1882, p. 378; *B. O. U. List Brit. B.* p. 57 (1883); *Seebohm, Ibis,* 1883, p. 10; *Radde, Orn. Cauc.* p. 163 (1884); *Giglioli, Avif. Ital.* p. 42 (1886); *Salvad. Elench. Ucc. Ital.* p. 181 (1887).

Crucirostra abietina, *Meyer, Vög. Liv- und Esthl.* p. 72 (1815).

Crucirostra pinetorum, *Meyer, t. c.* p. 71 (1815).
Crucirostra europæa, *Leach, Syst. Cat. Mamm. &c. Brit. Mus.* pp. 12, 13 (1816).
Crucirostra media, *Brehm, Vög. Deutschl.* p. 242 (1831).
Crucirostra montana, *Brehm, t. c.* p. 243.
Crucirostra pinetorum, *Brehm, t. c.* p. 244.
Crucirostra pytiopsittacus, *Brehm, t. c.* p. 241.
Crucirostra subpytiopsittacus &c., *Brehm, t. c.* p. 242.
Loxia europæa, *Macgill. Brit. B.* i. p. 417 (1837).
Loxia americana, *Bp. Comp. List B. Eur. & N. Amer.* p. 38 (1838); *Gray, Gen. B.* ii. p. 388 (1845); *Bp. Consp.* i. p. 527 (1850); *Scl. Cat. Amer. B.* p. 121 (1862); *Lawr. Ann. Lyc. N. Y.* viii. p. 288 (1866); *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 56 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Ridgw. Rep. Orn. 40th Parallel*, p. 455 (1877); *Salvin, Cat. Strickl. Coll.* p. 202 (1882).
Loxia himalayana, *Hodgs. Icon. ined., Passeres*, pl. 310. figs. 1, 2 (no. 671); *id. J. A. S. Beng.* xiii. p. 952 (1842); *id. in Gray's Zool. Misc.* p. 83 (1844); *id. P. Z. S.* 1845, p. 35; *id. Ann. Nat. Hist.* xvi. p. 206 (1845); *Gray, Gen. B.* ii. p. 388 (1845); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 111 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 123 (1849); *Bp. Consp.* i. p. 527 (1850); *id. & Schl. Monogr. Loxiens*, p. 6, pl. 7 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 453 (1856); *Blyth. Ibis*, 1862, p. 92; *Jerd. B. Ind.* ii. p. 393 (1863); *Blyth, Ibis*, 1867, p. 43; *Gray, Hand-l. B.* ii. p. 108, no. 7635 (1870); *David & Oust. Ois. Chine*, p. 360 (1877); *Hume, Str. F.* 1879, p. 108.
Loxia mexicana, *Strickl. Contr. Orn.* 1851, p. 43, note; *Scl. P. Z. S.* 1859, p. 365; *id. Cat. Amer. B.* p. 122 (1862); *id. P. Z. S.* 1864, p. 74; *Salvin, Ibis*, 1866, p. 193; *id. Cat. Strickl. Coll.* p. 202 (1882).
Crucirostra brachyrhynchos, etc., *Brehm, Naum.* 1853, pp. 185, 187.
Crucirostra paradoxa, etc., *Brehm, t. c.* pp. 190, 192.
Crucirostra major, *Brehm, Naum.* 1855, p. 275.
Crucirostra longirostris, *Brehm, t. c.* p. 275.
Crucirostra curvirostra, var. balearica, *Homeyer, J. f. O.* 1862, p. 256.
Crucirostra balearica, *Homeyer, J. f. O.* 1864, p. 224.
Loxia balearica, *Newton, Zool. Rec.* 1864, p. 84.
Curvirostra mexicana, *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869).
Loxia albiventris, *Swinh. P. Z. S.* 1870, p. 437, 1871, p. 387; *id. Ibis*, 1875, p. 450; *David & Oust. Ois. Chine*, p. 360 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 246; *Jouy, Proc. U.S. Nat. Mus.* vi. p. 295 (1883); *Ridgw. t. c.* p. 371 (1883); *Blakist. Amended List B. Japan*, pp. 18, 64 (1884).
Curvirostra americana, var. mexicana, *Coues, Key N. Amer. B.* p. 129 (1872).
Loxia curvirostra, var. americana, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 484, pl. 23. figs. 1–4 (1874); *Coues, B. N.-West*, p. 109 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 248 (1875); *Belding, Proc. U.S. Nat. Mus.* i. p. 412 (1878).
Loxia curvirostra, var. mexicana, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 488 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 248 (1875).
Loxia curvirostra mexicana, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 176 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 350 (1884).
Loxia curvirostra americana, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 176 (1883); *Nelson, Cruise R.S. 'Corwin,'* p. 66 (1883); *Coues, Key*

N. Amer. B. 2nd ed. p. 349 (1884); *Scott, Auk,* i. p. 159 (1884); *Ridgw. t. c.* p. 292; *Drew, Auk,* 1885, p. 16; *Brown, t. c.* p. 105; *Henshaw, t. c.* p. 332.

Loxia curvirostra bendirei, *Ridgw. Proc. Biol. Soc. Washington,* ii. p. 101 (1885); *Batchelder, Auk,* ii. p. 128 (1886).

Loxia curvirostra japonica, *Ridgw. Proc. Biol. Soc. Washington,* ii. p. 101 (1885).

Loxia curvirostra stricklandi, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 354 (1885); *A. O. U. Check-list N. Amer. B.* p. 257 (1886).

Loxia curvirostra minor, *Brewster, Auk,* iii. p. 107 (1886); *Anthony, t. c.* p. 168; *Seton, t. c.* p. 322; *A. O. U. Check-list N. Amer. B.* p. 257 (1886).

Adult male. General colour above pale vermilion, more dusky on the mantle and back, the feathers having dusky bases; scapulars dusky, washed with vermilion; rump clear vermilion or pale scarlet; wing-coverts sepia-brown, fringed with dull vermilion, more distinct on the lesser coverts; bastard-wing, primary-coverts, and quills sepia-brown, with faintly-indicated fringes of red, a little more distinct on the primaries; upper tail-coverts and tail-feathers sepia-brown, washed or fringed with red on the edges; crown of head pale vermilion like the back, the nasal plumes ashy fulvous; lores and a line through the eye above the ear-coverts dusky brown, extending behind the latter; ear-coverts deeper vermilion, like the cheeks and under surface of the body; the sides of neck, lower abdomen, sides of body, and flanks ashy brown washed with vermilion; thighs ashy brown; under tail-coverts dull white, with brown centres and slightly washed with red; under wing-coverts and axillaries dark ashy brown, washed with red externally; quills below dusky brown, more ashy along the inner edge; bill and feet brown; iris dark hazel. Total length 6 inches, culmen 0·8, wing 3·8, tail 2·2, tarsus 0·6.

Adult female. Differs from the male in being olive-yellow where the latter is red; the head and lower back and rump much brighter than the mantle, which is dusky brown, the feathers yellow only on their edges; ear-coverts ashy, with a slight wash of yellow; under surface of body yellow, with ashy bases to the feathers; centre of abdomen clear pale ashy; sides of body, flanks, and thighs darker ashy brown. Total length 6 inches, culmen 0·8, wing 3·85, tail 2·2, tarsus 0·65.

Young birds most resemble the old female, but are striped above and below, the prevailing colour being ashy brown slightly washed with yellow, and streaked with darker brown down the centre of the feathers; the rump a little brighter yellow, with dark-brown centres; head like the back, the eyebrow whiter, streaked with dusky; sides of face uniform ashy brown, washed with olive; under surface of body dull white, slightly washed with yellow, and having all the feathers mesially streaked with blackish brown.

Between the sexes there is little difference in the *nestling stage*, the male birds being a trifle brighter and more yellow below and on the rump, the latter being also less streaked.

In the nest the whole of the upper plumage is browner, this tint disappearing gradually after the birds have flown.

After the first moult the tints of the male become more orange and uniform, but the flanks are striped, and there are more or less remains of striped feathers about the other portions of the body, these being part of the first plumage. A specimen shot by Mr. Wheelwright in November is in this stage.

In the Gould collection was a very fine series of Crossbills procured by the late Henry Wheelwright, and showing all the stages of plumage, conclusively proving that the bright colour of the male is gradually assumed, and that it takes two, or even three, moults before the full red plumage is gained.

The plumage of the female is assumed without any marked progression of changes. After the first moult the colour is very like that of the fully adult bird, but is duller and greener, as well as being mottled with dusky centres to the feathers on the upper surface, while there are still plentiful broad streaks of dusky brown on the under surface and especially on the flanks. At least two moults take place before the full plumage is attained.

A series of males of *L. curvirostra* in the Museum have the culmen 0·7–0·85 inch and the wing 3·7–4·05. Females measure 0·6–0·8 inch in the culmen and 3·65–3·8 inches in the wing. Japanese birds, which might be expected to approach *L. americana*, have the culmen 0·7–0·75 and the wing 3·6–3·7 inches.

The series of American Crossbills (*L. americana*) measures as follows:—Males have the culmen 0·7 and the wing 3·55–3·8 inches. Females have the culmen 0·65–0·8 and the wing 3·55–3·7 inches.

Examples from New Brunswick have the culmen only 0·6 and the wing 3·2–3·3 inches, and belong apparently to the small race described and figured by Mr. Ridgway in the 'History of North-American Birds.'

Males of *L. mexicana* (*L. stricklandi*, Ridgw.) have the culmen 0·75–0·8 and the wing 3·85–4·1 inches. The female measures:—culmen 0·75, wing 3·65 inches.

Males of *L. himalayana* have the culmen 0·55–0·7 and the wing from 3·2 to 3·55 inches. The females measure:—culmen 0·6–0·65 and the wing 3·15–3·3 inches.

From the above measurements it appears that there is no hard-and-fast line to be drawn from the measurements of the Crossbills, every form of which appears to grade into another. I have kept the specimens under distinct headings for the sake of convenience; but I do not consider the different forms to be worthy even of subspecific rank.

The largest form of Crossbill is that known as *Loxia pytiopsittacus*, or the Parrot Crossbill, which has often a bill twice as stout as that of *L. curvirostra*. Total length 6·5 inches, culmen 0·85–0·9, wing 3·9, tail 2·25–2·45, tarsus 0·7–0·8.

Hab. The greater part of Europe and Northern Asia, to Japan and North China. Himalayas. North America as far as Mexico.

α. L. curvirostra.

a. ♂; *b, c*. ♀ ad.; *d–f*. Juv. sk.	Ross-shire, May 1874.	R. B. Sharpe, Esq. [P.].
g. ♀ ad. sk.	Lincolnshire.	Montagu Coll.
h. ♂ ad.; *i*. ♂ jun. sk.	Norwich.	Salvin-Godman Coll.
k. ♂ imm. sk.	Saffron Walden, Essex.	Mr. J. Clark.
l. ♀ ad. sk.	Highgate, near London Nov. 16, 1868 (*R. B. S.*).	Hume Coll.
m. ♂ ad. sk.	Somersetshire.	Montagu Coll.
n, o. ♂ ♀ ad. sk.	Borregaard, S. Norway, Feb. 21, 1859 (*P. Godman*).	Salvin-Godman Coll.
p, q, r, s, t. ♂ ad.; *u*. ♀ ad. sk.	Gardsjo, Sweden, Feb. 1863 (*H. Wheelwright*).	Gould Coll.
v. ♂ ad. sk.	Gardsjo, March 1863 (*H. W.*).	Gould Coll.
w, x. ♂ ad.; *y*. ♀ ad.; *z, a'*. ♂ ♀ jun. sk.	Gardsjo, Nov. 10, 1862 (*H. W.*)	Gould Coll.
b', c'. Pull. sk.	Sweden (*H. W.*).	Gould Coll.
d'. ♂ jun. sk.	Stockholm, Dec. 5, 1858 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
e'. ♂ ad. sk.	Wermland, Jan. 15, 1874.	W. Meves [C.].
f'. ♀ ad. sk.	Corsica, May 20, 1884.	J. Whitehead, Esq. [P.].

β. L. japonica.

g', h'. ♂ ♀ ad. sk.	Japan.	Prof. Milne [C.].
i'. ♂ ad. sk.	Japan.	Gould Coll.
k'. ♂ ad. sk.	Japan (*Capt. St. John*).	Hume Coll.

γ. L. pytiopsittacus.

l'. ♀ ad. sk.	Bostal Common, Plumstead, Kent, Jan. 1868.	H. Whitely, Esq. [P.].
m', n'. ♂ ♀ ad. sk.	Borregaard, Norway, Feb. 21, 1859 (*P. Godman*).	Salvin-Godman Coll.
o'. ♂ ad. sk.	Sarpsborg, Norway (*F. Godman*).	Salvin-Godman Coll.
p', q'. ♂ ♀ ad. sk.	Gardsjo, Sweden, April 1861 (*H. Wheelwright*).	Gould Coll.
r'. ♂ ad.; *s'*. ♀ ad. sk.	Gardsjo, Sweden, March 1863 (*H. Wheelwright*).	Gould Coll.
t'. ♂ ad.; *u'*. ♀ juv. sk.	Wermland, June 10, 1872.	W. Meves [C.].
v', w'. ♂ ad. sk.	Wermland, April 1873.	W. Meves [C.].
x', y'. ♂ ♀ ad. sk.	Wermland, Oct. 18, 1872.	W. Meves [C.].
z'. Pull. sk.	Wermland, May 10, 1872.	W. Meves [C.].
α, β. ♂ ♀ ad. sk.	Darmstadt.	Hume Coll.

δ. L. himalayana.

γ, δ. ♂ ♀ ad.; *ε*. Juv. sk.	Nepal.	Hodgson Coll. (Types of *L. himalayana*.)
ζ. ♂ ad. sk.	Nepal (*Hodgson*).	Gould Coll.
η. ♀ ad. sk.	Nepal (*Hodgson*).	India Museum.
θ. ♀ ad. sk.	Nepal.	Hodgson Coll.
ι. ♂ ad. sk.	Native Sikhim, Jan. 1873 (*L. Mandelli*).	Hume Coll.
κ, λ. ♂ ad. sk.	Native Sikhim, Feb. 1875 (*L. Mandelli*).	Hume Coll.

μ. ♂ imm. sk.	Native Sikhim, May 1873 (*L. Mandelli*).	Hume Coll.
ν. ♂ ad. sk.	Native Sikhim, Sept. 1878 (*L. Mandelli*).	Hume Coll.
ξ, o. ♂ juv. sk.; π, ρ. ♀ juv. sk.	Interior of Sikhim, Feb. 1873 (*L. Mandelli*).	Hume Coll.
σ, τ. ♂ ♀ ad. sk.	Sikhim, April 1873 (*L. Mandelli*).	Hume Coll.
υ. ♂ ad.; ϕ, χ. Juv. sk.	Sikhim, May 1873 (*L. Mandelli*).	Hume Coll.
ψ, ω, a'. Juv. sk.	Sikhim.	Hume Coll.
β'. ♀ ad. sk.	Thibet, March 1875 (*L. Mandelli*).	Hume Coll.
γ', δ'. ♂ juv. sk.	Thibet, March 1875 (*L. Mandelli*).	Hume Coll.
ϵ'. ♂ ad.; ζ'. ♂ juv. sk.	Thibet, April 1875 (*L. Mandelli*).	Hume Coll.
η'. ♂ ad. sk.	Thibet, Oct. 1876 (*L. Mandelli*).	Hume Coll.
	ϵ. L. americana.	
θ'. ♂ imm. sk.	N. America.	Gould Coll.
ι'. ♂ ad. sk.	N. America (*Lawrence*).	Sclater Coll.
κ'. ♀ ad. sk.	Hamilton, Canada, Mar. 26, 1883 (*K. C. McIlwraith*).	R. B. Sharpe, Esq.
λ', μ'. ♂ ♀ ad. sk.	Canada.	Gould Coll.
ν', ξ'. ♂ ♀ ad. sk.	Nova Scotia (*Downes*).	Sclater Coll.
o', π'. ♂ ♀ ad. sk.	New Brunswick (*G. Boardman*; Sm. no. 23259-60).	Salvin-Godman Coll.
ρ'. ♂ ad. sk.	Musquash, New Brunswick, March 31 (*A. Dunn*).	Salvin-Godman Coll.
σ'. ♂ ad. sk.	New Jersey, March 1853 (*Dr. A. L. Heermann*).	Hume Coll.
τ'. ♂ ad. sk.	Maine, Feb. 26, 1882 (*G. W. Palmer*).	R. B. Sharpe, Esq.
υ', ϕ'. ♂ ad. sk.	Chicago, Illinois, spring (*H. K. Coale*).	R. B. Sharpe, Esq.
χ'. ♂ ad. sk.	Garrisons, N. York, Dec. 30 (*Roosevelt*; Sm. no. 86892).	U.S. Nat. Mus. [P.].
ψ', ω'. ♂ ♀ ad. sk.	Vancouver Island.	Gould Coll.
a. ♂ ad. sk.	Vancouver Island.	J. K. Lord, Esq. [C.].
b, c, d, e. ♂ ad.; f, g, h, i. ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
k, l, m, n. ♂ ♀ imm. sk.	California.	Lord Walsingham.
o. ♂ ad.; p, q. ♀ ad. sk.	California.	Lord Walsingham.
	ζ. L. mexicana.	
r, s. ♂ ♀ ad. sk.	Mexico (*Boucard*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Mexico (*White*).	Sclater Coll.
u. ♂ ad. sk.	Jalapa (*De Oca*).	Sclater Coll.
v. ♀ ad. sk.	Mexico.	Purchased.
w. ♂ ad. sk.	Mexico.	Purchased.
	Skeletons.	
x. Sternum.	England.	John Ray, Esq. [P.].
y, z. Skeletons.	England.	Purchased.
a', b'. Skeletons.	Lapland.	Purchased.

2. Loxia bifasciata.

Crucirostra bifasciata, *Brehm, Ornis*, iii. p. 85 (1827); *id. Isis*, 1827, p. 714.

Loxia tænioptera, *Gloger, Isis*, 1827, p. 411; *Gray, Gen. B.* ii. p. 388 (1845); *id. Hand-l. B.* ii. p. 108, no. 7637 (1870); *Salvad. Faun. Ital., Ucc.* p. 164 (1871).

Crucirostra tænioptera, *Brehm, Isis*, 1827, p. 716.

Loxia bifasciata, *Selys-Longch. Faun. Belge*, p. 76 (1842); *Schl. Rev. Crit.* p. 68 (1844); *Thomps. B. Irel.* i. p. 283 (1849); *Bp. Consp.* i. p. 527 (1850); *id. & Schl. Monogr. Loxiens*, p. 7, pl. 8 (1850); *Schl. Vog. Nederl.* pl. 178 (1854); *Licht Nomencl. Av. Neotr.* i. p. 48 (1854); *Sundev. Sv. Fogl.* pl. i. fig. 5, pl. ii. fig. 1 (1856); *Gray, List Brit. B.* p. 111 (1863); *Degl. et Gerbe, Orn. Eur.* i. p. 264 (1867); *Gould, B. Gt. Br.* iii. pl. 47; *Fritsch, Vög. Eur.* Taf. 19. fig. 2 (c. 1870); *R. Gray, B. West Scotl.* p. 155 (1871); *Harting, Handb. Brit. B.* p. 115 (1872); *Fallon, Ois. Belg.* p. 93 (1875); *Newt. ed. Yarr. Brit. B.* ii. p. 211 (1877); *Dresser, B. Eur.* iv. p. 141, pl. 205 (1877); *Seebohm, Ibis*, 1880, p. 187; *Giglioli, Ibis*, 1881, p. 204; *Seebohm, Ibis*, 1882, p. 378; *B. O. U. List Brit. B.* p. 58 (1883); *Seebohm, Hist. Brit. B.* ii. p. 27 (1884); *Salvad. Elench. Ucc. Ital.* p. 182 (1887).

Loxia leucoptera (*nec Gm.*), *Middend. Reis. Sibir., Zool.* p. 154 (1851); *Kjærb. Orn. Dan.* Taf. 28 *b*. fig. 1 (1852); *Schrenck, Reis. Amurl.* p. 303 (1859); *Radde, Reis. Sibir., Vög.* p. 194 (1863); *Borggr. Vogelf. Norddeutschl.* p. 78 (1869); *Cordeaux, Ibis*, 1875, p. 183.

Crucirostra rubrifasciata, etc., *Brehm, Naum.* 1853, pp. 194, 199, 241, 245, 251, 253.

Loxia (Crucirostra) tænioptera, *Naum. Vög. Deutschl.*, Anhang, pl. 385. figs. 1, 2, 3.

Adult male. General colour above pale scarlet, the back more or less mottled with dusky brown, the feathers being of the latter colour tipped with scarlet; rump uniform pale scarlet; lesser wing-coverts dark brown, washed with ruddy or yellowish brown; median coverts white, with dusky bases, forming a wide band; greater coverts blackish, broadly tipped with white, forming a second wing-bar; bastard-wing, primary-coverts, and quills blackish brown, edged narrowly with reddish, a little plainer on the primaries, the secondaries fringed with white at the ends, the innermost broadly tipped with white; upper tail-coverts blackish brown, edged and tipped with pale red; tail-feathers blackish brown, edged with paler brown; crown of head scarlet like the back, and similarly varied with the dusky bases of the feathers; hind neck rather browner nasal plumes brown; lores, feathers below the eye, and a streak along the upper part of the ear-coverts dusky brown; remainder of the ear-coverts, cheeks, and under surface of body rosy, inclining to scarlet on the breast: the abdomen whitish; sides of body and flanks pale scarlet; thighs light ashy; under tail-coverts whitish, with broad longitudinal centres of black; under wing-coverts and axillaries whitish, with a wash of scarlet, the greater series ashy at base; quills below ashy, lighter along the inner edge. Total length 5·5 inches, culmen 0·7, wing 3·65, tail 2·1, tarsus 0·7.

The so-called *Loxia rubrifasciata* of Brehm is probably only the

present species in its finest plumage, when the white bands on the wings are tinted with red. The adult male described is one in worn breeding-plumage, and there are even still remains of red on the white bands. A specimen of *L. rubrifasciata* from Sweden is rather large, and measures:—Total length 6·3 inches, culmen 0·7, wing 3·8, tail 2·25, tarsus 0·65.

Hab. Northern Europe to Eastern Siberia. Accidental in the British Islands and other parts of Europe.

a. ♂ ad. sk.	Gardsjo, Sweden, Nov. 16, 1862 (*H. Wheelwright*).	Gould Coll.
b. ♂ ad. sk.	Sweden, Sept. 28, 1856 (*W. Meres*).	Gould Coll.
c. ♀ ad. sk.	Stockholm, Oct. 25, 1857 (*W. Meves*).	Gould Coll.
d. ♂ ad. sk.	Archangel, June 1875.	Hume Coll.
e. ♀ ad. sk.	Archangel, April 13, 1875.	Hume Coll.

Subsp. *a.* **Loxia leucoptera.**

White-winged Crossbill, *Lath. Gen. Syn.* ii. pt. i. p. 108 (1783).

Loxia leucoptera, *Gm. Syst. Nat.* i. p. 845 (1788); *Werner, Atlas, Granivores*, pl. 45 (1827); *Audub. B. Amer.* pl. 201; *Bp. Amer. Orn.* ii. p. 84, pl. 15. fig. 3 (1828); *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 263 (1831); *Jard. ed. Wils. Amer. Orn.* ii. p. 42, pl. 31. fig. 3, iii. p. 440, pl. 15. fig. 3 (c. 1834); *Temm. Man. d'Orn.* iii. p. 243 (1835); *Gould, B Eur.* iii. pl. 203 (1837); *Audub. Orn. Biogr.* iv. p. 467 (1838); *id. B. Amer.* iii. p. 190, pl. 201 (1841); *Keys. & Blas. Wirb. Eur.* p. 164 (1840); *Selys-Longch. Faun. Belge*, p. 77 (1842); *Giraud, B. Long Isl.* p. 131 (1844); *Macgill. Hist. Brit. B.* ii. p. 28 (1845); *Gray, Gen. B.* ii. p. 388 (1845); *Bp. Consp.* i. p. 527 (1850); *id. & Schl. Monogr. Loxiens*, p. 8, pl. 9 (1850); *Cab. Mus. Hein.* Th. i. p. 527 (1850); *Licht. Nomencl. Av. Berol.* p. 48 (1854); *Reinh. Ibis*, 1861, p. 8; *Scl. Cat. Amer. B.* p. 122 (1862); *Gray, List Brit. B.* p. 111 (1863); *Swinh. P. Z. S.* 1863, p. 327; *Lawr. Ann. Lyc. N. Y.* viii. p. 288 (1866); *Gray, Hand-l. B.* ii. p. 108, no. 7636 (1870); *R. Gray, B. West Scotl.* p. 155 (1871); *Harting, Handb. Brit. B.* p. 116 (1872); *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 55 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 488 (1874); *Coues, B. N.-West*, p. 110 (1874); *Dresser, B. Eur.* iv. p. 137, pl 204 (1877); *Newton, ed. Yarr. Brit. B.* ii. p. 218 (1877); *Ridgw. Rep. Orn. 40th Parallel*, p. 456 (1877); *id. Proc. U.S. Nat. Mus.* iii. p. 176 (1880); *Salvin, Cat. Strickl. Coll.* p. 203 (1882); *Nelson, Cruise R.S. 'Corwin,'* p. 66 (1883); *B. O. U. List Brit. B.* p. 58 (1883); *Seebohm, Hist. Brit. B.* ii. p. 37 (1884); *Scott, Auk*, i. p. 159 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 348 (1884); *Drew, Auk*, ii. p. 16 (1885); *Gigl. Avif. Ital.* p. 44 (1886); *Anthony, Auk*, iii. p. 168 (1886); *Seton, t. c.* p. 322; *A. O. U. Check-list*, p. 258 (1886).

Loxia falcirostra, *Lath. Ind. Orn.* i. p. 371 (1790); *Yarr. Brit. B.* ii. p. 38 (1843).

Curvirostra leucoptera, *Wilson, Amer. Orn.* iv. p. 48, pl. 31. fig. 3 (1811); *Brehm, Isis*, 1837, p. 720; *Baird, B. N. Amer.* p. 427 (1885); *Dall & Bann. Trans. Chicago Acad.* i. p. 281 (1869); *Cooper, B. Calif.* p. 149 (1870); *Coues, Key N. Amer. B.* p. 129 (1872).

Loxia (Crucirostra) leucoptera, *Naum. Vög. Deutschl.*, Anhang, pl. 385. fig. 4 (1860).

Loxia atrata, *Homeyer, J. f. O.* 1879, p. 179; *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 234 (1880).

Adult male. General colour above rosy pink, paler on the rump, the scapulars and a bar across the lower back black; lesser wing-coverts black, washed with pink; median and greater coverts black, tipped with white, forming a double wing-bar; bastard-wing, primary-coverts, and quills black, with a spot of white at the end of the innermost secondaries; upper tail-coverts black, with a small spot of rosy white at the ends; tail-feathers black, narrowly fringed with brown externally and with white internally; crown of head and hind neck a little more crimson than the back; lores dusky; nasal plumes ashy fulvous; feathers round eye, sides of face, ear-coverts, and cheeks, as well as the throat and breast, bright rosy, inclining to crimson, with a black mark behind the ear-coverts; abdomen ashy grey; sides of body crimson like the breast; flanks ashy grey, broadly streaked with blackish; thighs ashy grey; under tail-coverts white, with black bases, and slightly tinged with rosy; under wing-coverts and axillaries ashy grey, slightly tinged with rosy; quills below dusky, ashy grey along the inner edge: "bill brownish black; legs and feet brown, claws black; iris dark brown" (*B. R. Ross*). Total length 6 inches, culmen 0·7, wing 3·55, tail 2·35, tarsus 0·6.

Adult female. Differs from the male in being olive-yellowish where the latter is red; rump pale yellow; head and back more or less mottled with dusky bases to the feathers; hinder surface of body ashy, washed with yellow on the throat, breast, and sides of body, the latter striped with dusky blackish. Total length 6 inches, culmen 0·65, wing 3·3, tail 2·25, tarsus 0·55.

The only difference of any moment that I have been able to find between the European and American White-winged Crossbills has been in the darker scapulars of the latter; but the series of European males examined by me has been too small to allow me to state whether this character is always well defined.

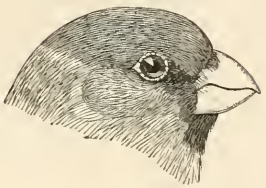
Hab. North America from Alaska to Labrador, wandering south in winter.

a. ♀ ad. sk.	Alaska.	Purchased.
b. ♂ ad. sk.	Fort Yukon, Alaska, April 7, 1877 (*L. M. Turner*; Sm. no. 73281).	U.S. Nat. Mus. [P.].
c, d. ♂; *e.* ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
f. ♂ ad. st.	Arctic America.	Sir G. Back [C.].
g, h. ♂ ♀ ad. sk.	Repulse Bay.	Dr. Rae [P.].
i, k. ♂ ♀ ad. sk.	Nova Scotia (*Downes*).	Sclater Coll.
l, m. ♂ ♀ ad. sk.	New Brunswick.	Hume Coll.
n. ♂ ad. sk.	Utica, New York (*J. Davis*; Sm. no. 77086).	Salvin-Godman Coll.
o. ♀ ad. sk.	Garrisons, New York, Jan. 1875 (*Roosevelt*; Sm. no. 86891).	Salvin-Godman Coll.
p. ♀ ad. sk.	Philadelphia (*J. Krider*; Sm. no. 77069).	U.S. Nat. Mus. [P.].
q, r, s. ♂; *t.* ♀ ad. sk.	North America.	Gould Coll.
u. ♂ ad. sk.	North America.	Hume Coll.

47. PYRRHULA.

Type.

Pyrrhula *Briss. Orn.* iii. p. 308 (1760) ..... P. europæa.



Head of *Pyrrhula pyrrhula.*

Range. Europe generally. Northern Asia to Japan and North China. Specially developed in the Himalayas, and thence extending into Western China.

Key to the Species.

a. Crown of head black.
  a'. With the ear-coverts scarlet or vermilion.
    a''. Cheeks of the same red tint as the breast ..... *pyrrhula* ♂, p. 446. / *kamtschatica* ♂, p. 447. / *europæa* ♂, p. 448.
    b''. Cheeks scarlet; breast grey..... *griseiventris* ♂, p. 449. / *kurilensis* ♂, p. 450.
    c''. Cheeks scarlet; breast lighter scarlet or pale rosy ..... *rosacea* ♂, p. 451.
  b'. With the ear-coverts brown or grey like the breast.
    d''. Rump white.
      a'''. Back ashy grey like the breast .... *cassini* ♂ ♀ ad., p. 452.
      b'''. Back brown; hind neck ashy grey, forming a more or less distinct collar..... *griseiventris* ♀, p. 450. / *rosacea* ♀, p. 451. / *pyrrhula* ♀, p. 446. / *europæa* ♀, p. 448.
    e''. Rump fawn-brown, not white..... *murina* ♂ ♀, p. 453.
b. Forehead only black.
  c'. Head red or yellow.
    f''. Back orange like the head ..... *aurantiaca* ♂, p. 456.
    g''. Back grey or drab-brown or ochreous brown.
      c'''. Head vermilion ..... *erythrocephala* ♂, p. 457.
      d'''. Head olive-yellow, with a drab-brown band across the sinciput.... *erythrocephala* ♀, p. 457.
  d'. Head grey or drab-brown.
    e'''. Under surface drab-brown like the upper; a crimson mark on the innermost secondaries ..... *nipalensis* ♂ ♀, p. 453.
    f'''. Under surface vermilion; a white mark across the sinciput; no mark on secondaries ..... *erithacus* ♂, p. 455.
    g'''. Under surface ochreous brown; no white band on sinciput; no mark on secondaries ..... *aurantiaca* ♀, p. 456.

1. Pyrrhula pyrrhula.

Loxia pyrrhula, *Linn. Syst. Nat.* i. p. 300 (1766).
Pyrrhula rubicilla, *Pall. Zoogr. Rosso-Asiat.* ii. p. 7 (1811, pt.); *Linderm. Vög. Griechenl.* p. 58 (1860); *Alst. & Harvie Brown, Ibis*, 1873, p. 63; *Radde, Orn. Cauc.* p. 180 (1884).
Fringilla pyrrhula, *Meyer, Vög. Liv- u. Esthl.* p. 81 (1815); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 182 (1840).
Pyrrhula vulgaris, *Ménétr. Cat. rais. Cauc.* p. 43 (1832); *Kjærb. Danm. Fugle*, Taf. 28 *a*. fig. 3, Suppl. pl. 28 *a*. fig. 2 (1852); *Schl. Vog. Nederl.* pl. 173 (1854); *Sundev. Svensk. Fogl.* pl. 11. figs. 4, 5 (1856); *Fritsch, Vög. Eur.* p. 253, pl. 22. figs. 1, 2 (1870); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Homeyer & Tancré, MT. orn. Ver. Wien*, p. 89 (1883).
Pyrrhula major, *Brehm, Vög. Deutschl.* p. 252 (1831); *Dresser, B. Eur.* iv. p. 97, pl. 198 (1876); *Danf. Ibis*, 1878, p. 25; *Seebohm, t. c.* p. 334; *Gould, B. Asia*, iv. pl. 38 (1880); *Seebohm, Ibis*, 1882, pp. 219, 378; *Salvad. Elench. Ucc. Ital.* p. 179 (1887).
Pyrrhula coccinea, *Selys-Longch. Faun. Belge*, p. 79 (1842); *Bp. Consp.* i. p. 525 (1850); *Blyth, Ibis*, 1863, p. 442; *Degl. & Gerbe, Orn. Eur.* i. p. 251 (1867); *Gray, Hand-l. B.* ii. p. 99, no. 7481 (1870); *Tristr. Ibis*, 1871, p. 232; *Taez. Bull. Soc. Zool. France*, i. p. 182 (1876).
Pyrrhula pyrrhula, *Licht. Nomencl. Av. Berol.* p. 48 (1854); *Stejn. Proc. U.S. Nat. Mus.* 1887, p. 105.
Pyrrhula germanica, *Brehm, Naum.* 1855, p. 276; *id. Vogelf.* p. 98 (1855).
Pyrrhula peregrina, *Brehm, Naum.* 1855, p. 276; *id. Vogelf.* p. 90 (1855).
Pyrrhula europæa, *Dresser, Ibis*, 1875, p. 244; *Stejn. Nyt Mag. Naturv. Christ.* 1882.

Adult male. General colour above bluish grey, the rump white; lesser and median coverts bluish grey, the latter rather paler towards the ends; greater coverts glossy black for the basal half, pale ashy grey for the terminal half; bastard-wing and primary-coverts black, washed with ashy; quills black, externally glossy black, the primaries fringed with ashy; inner secondaries entirely glossy black, the small innermost ones ashy grey at the base, pale vermilion towards the end of the feather, forming a spot; upper tail-coverts and centre tail-feathers glossy purplish black, the remainder of the tail-feathers black, externally glossy black; crown of head, feathers round eye, fore part of cheeks, and chin black: sides of face, ear-coverts, remainder of the cheeks, throat, and under surface of body pale vermilion; lower abdomen and lower flanks white: thighs ashy; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·5, wing 3·55, tail 2·6, tarsus 0·7.

Adult female. Exactly like the female of *P. europæa*, but larger. Total length 6·4 inches, culmen 0·45, wing 3·7, tail 2·6, tarsus 0·75.

Hab. Northern Europe and Siberia.

a, b. ♂ ♀ ad. sk.	Christiania (*Rasch*).	Gould Coll.
c. ♂ ad. sk.	Christiania, Jan. 1878 (*R. Collett*).	Christiania Mus.
d, e. ♂ ♀ ad.: *f.* ♂ juv. sk.	Christiania, Oct. 1883 (*R. Collett*).	Christiania Mus.

g. ♀ ad. sk.	Skåne, Sweden, March 20, 1869.	W. Meves [C.].
h. ♂ ad. sk.	S. Sweden, Feb. 11, 1869.	W. Meves [C.].
i, k. ♂ ♀ ad. sk.	Denmark, winter (*A. Benzon*).	J. Gould, Esq.
l. ♂ ad. sk.	St. Petersburg.	R. B. Sharpe, Esq. [P.].
m, n. ♂ ♀ ad. sk.	Anascha, Taurus, Asia Minor, March 7, 1876 (*C. G. Danford*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll.
p. ♂ ad. sk.	Krasnoyarsk, Dec. 3, 1877 (*H. Seebohm*).	Gould Coll.
q, r. Skulls.	S. Germany.	Dr. Günther [C.].

Subsp. α. Pyrrhula kamtschatica.

Pyrrhula rubicilla, *Pall. Zoogr. Rosso-Asiat.* ii. p. 8 (1811, pt.).
Pyrrhula kamtschatica, *Tacz. Bull. Soc. Zool. France*, vii. p. 395 (1882); *Dybowski, op. cit.* viii. p. 367 (1883).
Pyrrhula pyrrhula kamtschatica, *Stejneger, Bull. U.S. Nat. Mus.* no. 29, p. 322 (1885); *id. Proc. U.S. Nat. Mus.* 1887, p. 106.
Pyrrhula vulgaris kamtschatica, *Seebohm, Ibis*, 1887, p. 101.

An extreme eastern form of *P. pyrrhula*, and about the same size, only differing in the somewhat paler grey of the upper surface, and the extended white mark on the inner web of the outer tail-feather. Total length 6·6 inches, culmen 0·45, wing 3·2, tail 2·5, tarsus 0·75. (*Mus. H. Seebohm.*)

Hab. Kamtschatka.

The presence or absence of a white mark on the outer tail-feather is a character of less importance than would appear at first sight, for it is often present in European examples of *P. pyrrhula*, is more frequently found in Siberian specimens, and is more permanent in those from Kamtschatka.

2. Pyrrhula europæa.

The Bulfinch, *Albin, Nat. Hist. B.* i. p. 57, pls. 69, 70 (1738); *Lath. Gen. Syn.* ii. pt. i. p. 143 (1783).
The Black Bulfinch, *Albin, t. c.* iii. p. 65, pl. 69 (1740).
Le Bouvreuil, *Briss. Orn.* iii. p. 308 (1760); *Buff. Hist. Nat. Ois.* iv. p. 372, pl. 17 (1778); *Daub. Pl. Enl.* v. pl. 145 (♀, fig. pess.).
Le Bouvreuil noir, *Briss. Orn.* iii. p. 313 (1760).
Loxia pyrrhula (*nec Linn.*), *Lath. Ind. Orn.* i. p. 387 (1790); *Yarr. Brit. B.* ii. p. 1 (1843).
Fringilla pyrrhula, *Temm. Man. d'Orn.* p. 200 (1815).
Pyrrhula europæa, *Vieill. N. Dict. d'Hist. Nat.* iv. p. 286 (1816); *Wright, Ibis*, 1864, p. 50; *Smith, Ibis*, 1868, p. 446; *Elwes & Buckley, Ibis*, 1870, p. 192; *Dresser, B. Eur.* iv. p. 101, pl. 199 (1876); *Newton, ed. Yarr. Brit. B.* ii. p. 166 (1877); *Gigl. Iconogr. Avif. Ital.* pt. 5 (1880); *id. Ibis*, 1881, p. 204; *B. O. U. List Brit. B.* p. 56 (1883); *Irby, Ibis*, 1883, p. 185; *Saunders, Ibis*, 1884, p. 376; *Salvad. Elench. Ucc. Ital.* p. 178 (1887).
Pyrrhula rufa, *Koch, Syst. baier. Zool.* p. 227 (1816).
Pyrrhula vulgaris, *Temm. Man. d'Orn.* i. p. 338 (1820); *Naum. Vög. Deutschl.* iv. pl. 111 (1824); *Werner, Atlas, Granivores*, pl. 34 (1827); *Gould, B. Eur.* iii. pl. 209 (1837); *Bp. Comp. List B.*

Eur. & N. Amer. p. 38 (1838); *Crespon, Orn. Gard,* p. 238 (1840); *Selys-Longch. Faun. Belge,* p. 78 (1842); *Schl. Rev. Crit.* p. lxvii (1844); *Hewits. Eggs Brit. B.* i. p. 169, pl. 46. fig. 1 (1846); *Jaub. & Barth.-Lapomm. Rich. Orn.* p. 121 (1859); *Schl. Dier. Nederl., Vog.* p. 130, pl. 17. figs. 3, 4 (1861); *Degl. et Gerbe, Orn. Eur.* i. p. 250 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 159 (1867); *Keul. Onze Vogels,* i. pl. 36 (1869); *Gould, B. Gt. Br.* iii. pl. 41 (1870); *R. Gray, B. West Scotl.* p. 151 (1871); *Fritsch, J. f. O.* 1871, p. 309; *Harting, Handb. Brit. B.* p. 29 (1872); *Fallon, Ois. Bely.* p. 95 (1875).

Pyrrhula germanica, *Brehm, Vög. Deutschl.* p. 252 (1831); *Homeyer, J. f. O.* 1879, p. 175.

Pyrrhula peregrina, *Brehm, Vög. Deutschl.* p. 253 (1831).

Pyrrhula pileata, *Macgill. Hist. Brit. B.* i. p. 407 (1837).

Pyrrhula rubicilla (*nec Pall.*), *Keys. u. Blas. Wirb. Eur.* p. xli (1840); *Gray, Gen. B.* ii. p. 387 (1844, pt.); *Thomps. B. Irel.* i. p. 274 (1849); *Bp. Consp.* i. p. 525 (1850); *Gray, List Brit. B.* p. 109 (1863); *More, Ibis,* 1865, p. 130; *Borggr. Vogelf. Norddeutschl.* p. 74 (1869); *Gray, Hand-l. B.* ii. p. 99, no. 7477 (1870); *Salvad. Faun. Ital., Ucc.* p. 159 (1871); *Tristr. Ibis,* 1871, p. 232; *Danf. & Harvie Brown, Ibis,* 1875, p. 414.

Pyrrhula vulgaris, var. minor, *Schl. Vog. Nederl.* pl. 174 (1854).

Pyrrhula minor, *Brehm, Naum.* 1855, p. 276; *id. Vogelf.* p. 91 (1855).

Pyrrhula pyrrhula europæa, *Stejn. Proc. U.S. Nat. Mus.* 1887, p. 105.

Adult male. Similar to the male of *P. pyrrhula*, but much smaller and duller-coloured, especially as regards the vermilion colour underneath; bill black; feet dark brown; iris brown. Total length 6 inches, culmen 0·45, wing 3·1, tail 2·4, tarsus 0·65.

Adult female. Different from the male. General colour above earthy brown; rump white; lesser wing-coverts dull ashy brown; median coverts ashy, brown at the ends; greater coverts blue-black, broadly tipped with ochreous buff; bastard-wing and primary-coverts ashy brown; quills black, externally blue-black, the primaries edged with ashy near the tip; inner secondaries entirely blue-black, the one nearest the back ashy grey at base, pale vermilion towards the end of the outer web, forming a patch; upper tail-coverts and centre tail-feathers blue-black, the remainder black, externally blue-black; crown of head black, separated from the brown back by an ashy-grey shade which extends on to the sides of the neck; feathers round the eye, fore part of cheeks, and chin black; ear-coverts, remainder of cheeks, and under surface of body vinous chocolate, somewhat paler on the lower abdomen: sides of body and flanks like the breast; lores ashy; under tail-coverts white; under wing-coverts and axillaries ashy white; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·4, wing 3·1, tail 2·4, tarsus 0·65.

Young. Resembles the old female, but is of a duller brown, especially on the under surface; head brown like the back, with no trace of grey on the neck; rump white, washed with brown; wings and tail as in the adult, but the median coverts pale brown at the ends, and the greater coverts tipped with pale ochreous buff, the red streak on the innermost secondary replaced by pale brown.

Hab. Western, Central, and Southern Europe. The eastern range

is undefined, but it apparently ranges as far as Central Russia. The Moscow specimen recorded below was marked *P. atavica*, Severtz. (*Pyrrhula coccinea β*, var. *atavica*, Menzbier, Bull. Soc. Nat. Mosc. 1883, p. 111). It is a female, and differs from true *P. europæa* in being rather greyer on the back and paler below. I cannot judge of the claims of this form to specific rank until I have examined a male.

a. ♂ ad. sk.	Preston Hall, Shropshire, Feb. (*J. Gould*).	J. Gould, Esq.
b, c. ♂ ♀ ad. sk.	Shelford, Cambridgeshire, Jan. 1856 (*J. Baker*).	Salvin-Godman Coll.
d, e. ♂ ad. sk.	Cambridge (*J. G.*).	Gould Coll.
f, g. Pull. st.	Cambridgeshire.	Mr. J. Baker [C.].
h. Var. alb. sk.	Middlesex.	Old Coll.
i. ♂ ad. sk.	Hampstead, Middlesex (*O. S.*).	Salvin-Godman Coll.
k, l. ♂ ad.; *m*. ♀ ad. sk.	Surrey, Jan. 1857 (*F. Godman*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Surrey, March, 1866 (*F. G.*).	Salvin-Godman Coll.
o. Juv. sk.	Taplow, Bucks, June (*J. G.*).	Gould Coll.
p. ♂ juv. sk.	Cookham, Berks, July 25, 1874.	R. B. Sharpe, Esq. [P.].
q, r. ♀ ad. sk.	Cookham, Jan. 27, 1879.	R. B. Sharpe, Esq. [P.].
s. ♂ ad. sk.	Cookham, Feb. 23, 1885.	R. B. Sharpe, Esq. [P.].
t. ♀ ad. sk.	Cookham, Dec. 28, 1874.	R. B. Sharpe, Esq. [P.].
u, v. ♂ ♀ ad. st.	Cookham.	J. Gould, Esq.
w. ♂ ad. sk.	Oxford, Feb. 4, 1878.	R. B. Sharpe, Esq. [P.].
x. ♂ ad. st.	Brighton.	R. B. Sharpe, Esq. [P.].
y. ♂ ad. sk.	Avington, Hants, Nov. 25, 1872.	E. Shelley, Esq. [P.].
z, a'. ♂ ♀ ad. sk.	Avington, Hants, Dec. 3, 1872.	Capt. Shelley [P.].
b', c'. ♂ ♀ ad. sk.	Avington, Feb. 4, 1880.	R. B. Sharpe, Esq. [P.].
d'. ♀ ad.; *e'*. Var. melan. sk.	Devonshire.	Montagu Coll.
f'. ♀ ad. sk.	Axmouth, Devonshire, Dec. 1882.	R. B. Sharpe, Esq. [P.].
g'. ♂ ad. sk.	Belgium, May 1846.	Brussels Mus. [P.].
h'. ♂ ad. sk.	Seine-et-Oise, France (*F. Petit*).	E. Hargitt, Esq. [P.].
i'. ♂ ad. st.	France.	Baron Langier.
k'. ♂ ad. st.	France.	R. B. Sharpe, Esq. [P.].
l', m'. ♂ ♀ ad. st.	Savoy.	Purchased.
n'. ♀ ad. sk.	Moscow, March 7.	Dr. Lenz [C.].
o'. Skeleton.	England.	Purchased.

3. Pyrrhula griseiventris.

Pyrrhula griseiventris, *Lafr. Rev. Zool.* 1841, p. 240; *Blyth, Ibis* 1863, p. 442; *Gray, Hand-l. B.* ii. p. 99, no. 7482 (1870); *Swinh. P. Z. S.* 1871, p. 386; *Tristr. Ibis*, 1871, p. 232; *Stejneger, Proc. U.S. Nat. Mus.* 1887, p. 107.

Pyrrhula orientalis (pt.), *Temm. & Schl. Faun. Japon., Aves*, pl. 53 (1850); *Blakist. & Pryer, Ibis*, 1878, p. 247; *iid. B. Japan*, p. 176 (1882); *Jouy, Proc. U.S. Nat. Mus.* vi. p. 293 (1883); *Blakist. Amended List B. Japan*, p. 64 (1884); *Seebohm, Ibis*, 1887, p. 101.

Adult male. General colour above blue-grey, the rump white; lesser and median coverts dark ashy grey; greater coverts glossy

purplish black, ashy grey at the ends, the inner ones much more broadly tipped, the bases only black; bastard-wing and primary-coverts dusky black; quills black, externally purplish black, the secondaries more broadly edged with the latter colour; upper tail-coverts purplish black; tail-feathers black, edged with purplish black; crown of head purplish black; lores and feathers round the eye, as well as the fore part of the cheeks and chin, black; feathers round eye, ear-coverts, hinder cheeks, and remainder of throat pale scarlet; fore neck and remainder of under surface of body ashy grey, whiter on the abdomen; sides of body and flanks a little lighter ashy; thighs ashy grey; under tail-coverts white; under wing-coverts and axillaries white, the edge of the wing ashy grey; quills below dusky, ashy white along the inner edge. Total length 6 inches, culmen 0·4, wing 3·5, tail 2·45, tarsus 0·7.

Adult female. Different from the male. General colour above chocolate-brown, the rump white; lesser and median coverts ashy grey; greater coverts brown at base, washed externally with purplish black and tipped with pale ashy, the inner ones more broadly; bastard-wing and primary-coverts blackish; quills blackish, externally purplish black, the inner secondaries entirely of the latter colour; upper tail-coverts and centre tail-feathers purplish black, the remainder of the tail-feathers black, edged with purplish black; crown of head black, separated from the back by a broad collar of ashy grey; eyelid, fore part of cheeks, and chin black; ear-coverts, remainder of cheeks, and under surface of body chocolate-brown; lower abdomen and vent whitish; thighs chocolate-brown; under tail-coverts white; under wing-coverts and axillaries white, washed with brown; quills below dusky, ashy whitish along the inner edge. Total length 5·8 inches, culmen 0·4, wing 3·3, tail 2·55, tarsus 0·7.

Hab. Japan and the island of Askold, occasionally visiting the mainland of Eastern Siberia and extending to the neighbourhood of Pekin.

a. ♂ ad. sk.	Hakodadi, Japan, March 24, 1885 (*H. Whitely*).	Gould Coll.
b, c. ♂ ad. sk.	Yokohama (*H. Pryer*).	H. Seebohm, Esq. [P.].

Subsp. *a.* **Pyrrhula kurilensis.** (Plate XI.)

Pyrrhula kurilensis, *Sharpe, Zool.* 1886, p. 485; *Stejneger, Proc. U.S. Nat. Mus.* 1887, p. 110.
Pyrrhula orientalis kurilensis, *Seebohm, Ibis,* 1887, p. 101.

Adult male. Similar to *P. griseiventris*, but much paler in colour, being pale ashy brown above instead of blue-grey, and pale drab-brown below instead of bluish grey, but faintly tinged with rosy on the breast. Total length 5·3 inches, culmen 0·45, wing 3·5, tail 2·6, tarsus 0·7.

Adult female. Not to be distinguished from the female of *P. griseiventris*. Total length 6 inches, culmen 0·4, wing 3·25, tail 2·45, tarsus 0·7. (*Mus. H. Seebohm.*)

Hab. Kurile Islands.

a, b ♂ ♀ ad. sk.	Kurile Islands.	Purchased.

4. Pyrrhula rosacea.

Pyrrhula orientalis, *Temm. & Schl. Faun. Japon., Aves*, pl. 53 (1850, pt.); *Gould, B. Asia*, v. pl. 35 (1853); *Blakist. Ibis*, 1862, p. 328; *Whitely, Ibis*, 1867, p. 203; *Swinh. Ibis*, 1874, pp. 160, 463; *Dybowski, J. f. O.* 1876, p. 200; *Tacz. Bull. Soc. Zool. France*, i. p. 183 (1876); *Blakist. & Pryer, B. Japan*, p. 176 (pt.); *Jouy, Proc. U.S. Nat. Mus.* vi. p. 293 (pt.); *Blakist. Amended List B. Japan*, p. 64 (pt.).
Pyrrhula vulgaris (*nec T.*), *Middend. Sibir. Reis.* p. 149 (1851).
Pyrrhula vulgaris, var. orientalis, *Schrenck, Reis. Amur.* p. 291 (1859).
Pyrrhula cineracea, pt., *Dresser, B. Eur.* iv. p. 100 (1876).
Pyrrhula griseiventris, *David & Oust. Ois. Chine*, p. 348 (1877).
Pyrrhula rosacea, *Seebohm, Ibis*, 1882, p. 371; *Blakist. Amended List B. Japan*, pp. 18, 64 (1884).
Pyrrhula orientalis rosacea, *Seebohm, Ibis*, 1887, p. 101.

Adult male. Similar to *P. griseiventris*, but with a slight rosy tinge overshading the grey of the upper surface. The under surface, instead of being ashy grey, is pale scarlet or rosy, the colour of the ear-coverts and throat being continued over the breast and flanks, the lower abdomen being white, as well as the under tail-coverts. Total length 5·6 inches, culmen 0·4, wing 3·4, tail 2·5, tarsus 0·6.

Adult female. Not to be distinguished from the female of *P. griseiventris*. Total length 5·6 inches, culmen 0·4, wing 3, tail 2·3, tarsus 0·65.

Young of the year. Upper parts dirty olive-brown, darker on the head; rump white; below brownish, lighter in tint than the back; wings and tail as in adult; bill smoky brown; feet brownish. The chin black in some specimens. (*Jouy.*)

Mr. Jouy thinks that *P. rosacea* is only an advanced stage of plumage of *P. griseiventris*, and says that this is borne out by his series of specimens. I have examined a large number in Mr. Seebohm's collection and come to an opposite conclusion. The ranges of the two species are in all probability different, though they meet in one or two localities in Japan.

Hab. Eastern Siberia and Japan.

a, b. ♂ ad. sk.	Hakodadi, Japan, March 3, 1865.	Henry Whitely [C.].
c, d. ♂ ♀ ad. sk.	Hakodadi, Japan, March 3, 1865 (*H. Whitely*).	Gould Coll.
e, f. ♂ ♀ ad. sk.	Japan.	Professor Milne [C.].
g. ♂ ad. sk.	Japan.	J. Gould, Esq.
h. ♂ ad. sk.	Japan.	Leiden Museum.

5. Pyrrhula cassini.

Pyrrhula coccinea, var. cassini, *Baird, Trans. Chicago Acad.* i. p. 316, pl. 29 (1889); *Dall & Bann. t. c.* p. 281.
Pyrrhula cassini, *Tristr. Ibis*, 1871, p. 231; *Cab. J. f. O.* 1871, p. 318; *Finsch, Abhandl. nat. Ver. Bremen*, 1872, p. 54; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 457, pl. xxiii. fig. 11 (1874); *A. O. U. Check-list N. Amer. B.* p. 255 (1886); *Stejn. Proc. U.S. Nat. Mus.* 1887, p. 104.
Pyrrhula cineracea, *Cab. J. f. O.* 1872, p. 316; *Tacz. J. f. O.* 1873,

p. 95; *Dybowski, J. f. O.* 1874, p. 40, tab. 1; *Tacz. J. f. O.* 1875, p. 254; *Gould, B. Asia*, v. pl. 40 (1875); *Tacz. Bull. Soc. Zool. France*, i. p. 183 (1876), iv. p. 138 (1879); *Seebohm, Ibis*, 1882, p. 424; *Bolau, J. f. O.* 1882, p. 334.

Pyrrhula nepalensis (*nec Hodgs.*), *Severtz. Turkest. Jevotn.* pp. 64, 117 (1873); *Dresser, Ibis*, 1875, p. 245.

Pyrrhula cineracea pallida, *Seebohm, Ibis*, 1887, p. 101.

Adult male. General colour above blue-grey; the rump white; lesser and median coverts like the back; greater coverts purplish black, broadly tipped with blue-grey, the outer ones white at the ends; bastard-wing and primary-coverts dull grey; quills black, externally purplish black, the primaries edged with ashy; inner secondaries entirely purplish black; upper tail-coverts and centre tail-feathers purplish black, the remainder black, externally purplish black; crown of head glossy black; lores, eyelid, fore part of cheeks and chin, black; ear-coverts and remainder of cheeks pale ashy drab; throat and remainder of under surface of body light ashy grey, paler on the sides of the body and flanks; lower abdomen whitish grey; thighs dark ashy; under tail-coverts white; under wing-coverts and axillaries white, ashy near the edge of the wing; quills below dusky, ashy whitish along the inner edge. Total length 5·8 inches, culmen 0·4, wing 3·45, tail 2·5, tarsus 0·65.

Adult female. Only differs from the male in being a little more drab-coloured underneath. Total length 5·4 inches, culmen 0·45, wing 3·45, tail 2·8, tarsus 0·65.

Mr. Seebohm recognizes two races of this Bullfinch, but even he admits that the Altai specimen in his collection is "somewhat intermediate;" and I think that the differences between the pale and dark specimens are too slight for subspecific recognition.

The typical specimen of *P. cassini* was a female from Alaska, and as the hens of several of the Bullfinches are almost indistinguishable, it was difficult for me to judge of the species from a study of the description only, but I expected that it would be found to be identical with the large form of Bullfinch named by Dr. Taczanowski *P. kamtschatica*. Dr. Stejneger, however, states that *P. cassini* is identical with *P. cineracea*, and that he has verified this by comparison of specimens. I confess that its identity with *P. kamtschatica* still appears to me more probable.

Hab. Eastern Siberia, ranging as far west as the valley of the Yenesay and southwards into Turkestan. Accidental in Alaska.

a, b. ♂ ♀ ad. sk.	Onon River, Jan. 1873 (*Dr. Dybowski*).	Warsaw Museum.
c, d. ♂ ♀ ad. sk.	Onon River, Jan. 1873 (*Dr. Dybowski*).	Gould Coll.
e, f. ♂ ad. sk.	Kultuk, Lake Baikal, March.	Purchased.

6. Pyrrhula murina.

Pyrrhula coccinea (*nec De Selys*), *Pucher. Rev. Zool.* 1859, p. 413; *Morelet, Hist. Nat. des Açores*, p. 84 (1860); *Drouet, Faun. Azor.* p. 115 (1861).

Pyrrhula murina, *F. D. Godman, Ibis*, 1866, p. 97, pl. 3; *id. Azores*, p. 28 (1870); *Gray, Hand-l. B.* ii. p. 99, no. 7484 (1870); *Dresser, B. Eur.* iv. p. 107, pl. 200 (1876).

Adult male (type of species). General colour above brown, paler and more tawny brown on the rump, ending in ashy grey before the upper tail-coverts, which are glossy purplish black; lesser wing-coverts blackish, edged with brown; median coverts ashy grey with blackish bases; greater coverts purplish black, ashy at the tips, the inner ones ashy grey with black bases; bastard-wing and primary-coverts black; quills black, externally velvety black, the secondaries purplish black on the outer web, the inner ones entirely of the latter colour, the innermost externally orange, forming a longitudinal streak; tail-feathers black, externally purplish black; crown of head glossy black, separated from the back by a broad collar of ashy grey; feathers round eye, fore part of cheeks, and chin black; ear-coverts pale chocolate-brown, as also the cheeks and throat; fore neck and breast more ashy, the latter tinged with rosy on the lower part; abdomen, sides of body, and flanks chocolate-brown; thighs dusky brown; under tail-coverts pale chocolate, washed with ashy; under wing-coverts dull ashy; axillaries chocolate-brown, with ashy bases; quills below dusky, ashy along the inner edge. Total length 6·5 inches, culmen 0·5, wing 3·4, tail 2·65, tarsus 0·8.

Adult female. A little duller than the male, paler ashy below, and without any tinge of red on the lower breast. Total length 6 inches, culmen 0·55, wing 3·45, tail 2·6, tarsus 0·8.

Hab. Azores.

a, b. ♂ ♀ ad.; *c.* ♀ ad. sk.	S. Michael's, Azores, March 1865 (*F. D. G.*).	Salvin-Godman Coll.
d, e. ♂ ad.; *f.* ♀ ad. sk.	S. Michael's, April 1865 (*F. D. G.*).	Salvin-Godman Coll.
g. ♂ ad. sk.	S. Michael's, April 1865 (*F. D. G.*).	Salvin-Godman Coll. (Type of species.)

7. Pyrrhula nipalensis.

Pyrrhula nipalensis, *Hodgs. Asiat. Researches*, xix. p. 155 (1836); *id. Icon. ined. in Brit. Mus., Passeres*, pl. 309. figs. 1, 2 (nos. 498, 499); *id. in Gray's Zool. Misc.* p. 85 (1844); *Blyth, J. A. S. Beng.* xiii. p. 951 (1844); *Gray, Gen. B.* ii. p. 387 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 111 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 122 (1849); *Bp. Consp.* i. p. 525 (1850); *Gould, B. Asia*, v. pl. 27 (1853); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 455 (1856); *Jerd. B. Ind.* ii. p. 390 (1863); *Blyth, Ibis*, 1863, p. 442, 1867, p. 43; *Beavan, Ibis*, 1868, p. 177; *Gray, Hand-l. B.* ii. p. 99, no. 7480 (1870); *Tristr. Ibis*, 1871, p. 232; *Hume, Str. F.* 1879, p. 108; *Salvin, Cat. Strickl. Coll.* p. 203 (1882).

Adult male. General colour above drab- or mouse-brown, with a band of purplish black across the lower back, followed by a white band across the rump; lesser wing-coverts a little darker than the

back; median coverts dusky brown, the inner ones washed with purplish black at the ends; outer greater coverts glossy purplish black, pale drab at the ends, the inner ones entirely pale drab; bastard-wing and primary-coverts dusky blackish; quills black, externally purplish black, the inner secondaries shaded with bronzy and purplish black towards the ends; the small innermost secondary with a crimson streak down the outer web; upper tail-coverts and centre tail-feathers purplish black with a bronzy lustre, the edges and tips of the feathers velvety black; remainder of tail-feathers black, edged and tipped with purplish black; crown of head paler drab than the back, and mottled with dusky bases, imparting a spotted appearance; forehead and lores dusky blackish, as well as base of cheeks and chin; beneath the hinder part of the eye a whitish streak; ear-coverts and cheeks dark drab-brown; remainder of under surface drab-brown, becoming paler on the centre of the breast; the abdomen whitish; sides of body and flanks drab-brown; thighs also drab-brown; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, whitish along the inner edge: "bill greenish horn-colour with black tip; legs fleshy brown; iris brown" (*B. H. Hodgson*). Total length 6·5 inches, culmen 0·5, wing 3·4, tail 2·85, tarsus 0·65.

Adult female. Similar to the male, but having the streak on the innermost secondary yellow instead of red. Total length 6·5 inches, culmen 0·45, wing 3·35, tail 2·85, tarsus 0·65.

Hab. Confined to the Himalayas.

a, b. ♂ ad. sk.	Jerripani, Masuri, Feb. 1870.	Hume Coll.
c, d. Ad. sk.	Naini Tal, Oct. 1869 (*R. Thompson*).	Hume Coll.
e. Ad. sk.	Almora, Nov. 10, 1875.	Hume Coll.
f. ♂ ad. sk.	Sheopuri Ridge, Nepal Valley, Feb. 16, 1878 (*J. Scully*).	Hume Coll.
g, h, i, k. Ad. sk.	Nepal.	Hodgson Coll. (Types of *P. nipalensis.*)
l, m, n, o. Ad. sk.	Nepal (*Hodgson*).	India Museum.
p. ♂ ad.; *q, r.* ♀ ad. sk.	Native Sikhim, Jan. 1876 (*L. Mandelli*).	Hume Coll.
s. ♂ ad. sk.	Native Sikhim, March 1879 (*L. M.*).	Hume Coll.
t. ♂ ad. sk.	Native Sikhim, June 1875 (*L. M.*).	Hume Coll.
u, v. ♂ ad.; *w.* ♀ ad. sk.	Native Sikhim, Aug. 1873 (*L. M.*).	Hume Coll.
x, y. ♂ ad. sk.	Native Sikhim, Oct. 1873 (*L. M.*).	Hume Coll.
z. ♂ ad. sk.	Sikhim, Jan. 1876 (*L. M.*).	Hume Coll.
a'. ♂ ad. sk.	Sikhim, Feb. 1873 (*L. M.*).	Hume Coll.
b'. ♂ ad.; *c', d', e'.* ♀ ad. sk.	Sikhim, Sept. 1873 (*L. M.*).	Hume Coll.
f'. Imm. sk.	Sikhim (*W. E. Brooks*).	Hume Coll.
g'. ♀ ad. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
h', i'. ♀ ad. sk.	Sikhim (*J. Gammie*).	Hume Coll.
k', l', m', n'. Ad.; *o', p', q'.* Imm. sk.	Darjiling.	Hume Coll.

8. Pyrrhula erithacus.

Pyrrhula erithacus, *Blyth, Ibis*, 1862, p. 389; *id. J. A. S. Beng.* xxxii. p. 459 (1863); *id. Ibis*, 1863, p. 441, pl. 10; *Jerd. B. Ind.* ii. p. 389 (1863); *Blyth, Ibis*, 1868, p. 43; *Beavan, Ibis*, 1868, p. 177; *Gray, Hand-l. B.* ii. p. 99, no. 7483 (1870); *Tristr. Ibis*, 1871, p. 232; *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871); *Hume, Str. F.* 1874, p. 455; *Prjev. in Rowley's Orn. Misc.* ii. p. 297 (1876); *David & Oust. Ois. Chine*, p. 349 (1877); *Hume, Str. F.* 1879, p. 108; *Gould, B. Asia*, v. pl. 39 (1880).
Pyrrhula erythrocephala (*nec Vig.*), *Swinh. P. Z. S.* 1871, p. 387.

Adult male. General colour above dark slaty grey, with a bar of purplish black across the lower back; rump white; lesser wing-coverts slaty grey like the back; median coverts also grey, with black bases; greater coverts purplish black, broadly tipped with pale ashy grey; quills black, the secondaries externally purplish black, the innermost entirely of the latter colour; upper tail-coverts and centre tail-feathers purplish black, the remainder edged externally and tipped with purplish black; head like the back; forehead black, separated from the crown by a narrow band of ashy whitish which extends over the eye; eyelid, lores, and fore part of cheeks, as well as a chin-spot, black; ear-coverts and sides of neck ashy grey, separated from the black lores by a narrow line of ashy white, which extends below the black chin-spot, but is less distinct and somewhat tinged with red; remainder of throat ashy grey, washed with orange; fore neck and entire breast orange-scarlet; abdomen ashy brown, white in the centre; under tail-coverts white; flanks and thighs like the abdomen; under wing-coverts and axillaries ashy white; quills dusky below, ashy along the inner web: "bill black; tarsus body-colour; iris dark brown" (*Prjevalski*). Total length 6 inches, culmen 0·45, wing 3·3, tail 2·8, tarsus 0·65.

Mr. Hume's series consists of seven specimens, all varying but slightly in the extent and depth of the scarlet breast, which in some is tinged with olive-yellow. One specimen has the breast ashy grey, with only an appearance of scarlet, but is otherwise quite adult. The scarlet breast is therefore evidently gradually acquired.

According to Colonel Prjevalski, the female only differs from the male in having the underparts of a light chocolate-colour, the back darker.

Hab. Himalayas, hitherto known from Sikhim only. Western Szechuen in China, and Kansu.

a, b, c, d, e. ♂ ad.; *f.* ♂ imm. sk.	Sikhim, April 1874 (*L. Mandelli*).	Hume Coll.
g. ♂ ad. sk.	Darjiling.	Hume Coll.

9. Pyrrhula aurantiaca.

Pyrrhula aurantiaca, *Gould, P. Z. S.* 1857, p. 22; *Jerd. B. Ind.* ii. p. 390 (1853); *Blyth, Ibis*, 1863, p. 442; *Tristr. Ibis*, 1871, p. 232; *Hume & Henders. Lahore to Yarkand*, p. 258 (1873); *Stoliczka, Str. F.* 1874, p. 461; *Hume, Str. F.* 1879, p. 108; *Biddulph, Ibis*, 1881, p. 82; *Scully, t. c.* p. 577; *Marshall, Ibis*, 1884, p. 420.

Pyrrhula aurantia, *Gould, B. Asia*, v. pl. 34 (1858); *Adams, P. Z. S.* 1858, p. 484; *Gray, Hand-l. B.* ii. p. 99, no. 7479 (1870); *Hume, Nests & Eggs Ind. B.* p. 470 (1873).

Adult male. General colour above deep orange; rump white; wing-coverts black, edged with orange and subterminally ashy; greater series glossy purplish black, the terminal half pale orange, edged with ashy whitish; bastard-wing, primary-coverts, and quills black, edged with velvety black, the inner secondaries glossy purplish black, the innermost with a streak of orange near the outer web; upper tail-coverts velvety black; tail-feathers steel-black, edged with velvety black; crown of head like the back; a broad frontal band, as well as the lores, eyelid, fore part of cheeks, and upper part of throat, black; ear-coverts, sides of face, sides of neck, and remainder of under surface of body deep orange; lower flanks and thighs ashy white; under tail-coverts white, with a slight reddish tinge; axillaries and under wing-coverts white; quills dusky below, ashy along the edge of the inner web: "bill black; legs and feet ashy" (*G. Henderson*). Total length 5 inches, culmen 0·4, wing 3·2, tail 2·1, tarsus 0·65.

Immature males are yellow instead of orange, and every shade between yellow and deep orange is exhibited by the series in the Museum.

Adult female. Different from the male. General colour above brown, with an ochreous tinge; rump white; head and hind neck slaty grey; lesser and median wing-coverts ashy grey, with a tinge of ochre-yellow; greater coverts velvety black, the outer ones tipped with yellowish white, the inner ones with their terminal halves ochreous brown with a yellow tinge; bastard-wing and primary-coverts dusky blackish; quills black, externally velvety black, the innermost entirely blue-black; upper tail-coverts velvety black; tail-feathers black, edged with blue-black; forehead, lores, eyelid, fore part of cheeks, and chin black, forming a mask which is separated from the grey head by a narrow line of ashy whitish; ear-coverts and hinder cheeks ashy grey; under surface of body warm brown, becoming more ochreous on the abdomen and flanks, which are also slightly tinged with yellow; lower abdomen and under tail-coverts white; thighs ashy; under wing-coverts and axillaries white; quills blackish below, ashy along the edge of the inner web. Total length 5 inches, culmen 0·35, wing 3·1, tail 1·95, tarsus 0·55.

Hab. Cashmere.

a. ♂ ad. sk.	Cashmere.	J. Gould, Esq. (Type of species.)
b. ♂ ad. sk.	Baltal, June 20, 1870 (*G. Henderson*).	Hume Coll.
c, d. ♂ ad. sk.	Gilgit, June 1876 (*J. Biddulph*).	Hume Coll.
e. ♀ ad. sk.	Gilgit, July 1876 (*J. B.*).	Hume Coll.
f, g. ♂ ♀ ad. sk.	Sonamurg, Cashmere, July 16 (*J. B.*).	Gould Coll.
h. ♂ ad. sk.	Cashmere, Sept. 1875.	Hume Coll.
i. ♀ ad. sk.	Sind Valley, Cashmere.	Hume Coll.
k, l. ♂ ♀ ad. sk.	Murree, May 1875.	Hume Coll.
m. ♂ ad. sk.	N.W. Himalayas.	

10. Pyrrhula erythrocephala.

Pyrrhula erythrocephala, *Vigors, P. Z. S.* 1831, p. 174; *Gould, Cent. Himal. B.* pl. 32 (1832); *Hodgs. Icon. ined. in Brit. Mus., Passeres,* pl. 308. figs. 1–4 (nos. 335–338); *id. in Gray's Zool. Misc.* p. 85 (1844); *Blyth, J. A. S. Beng.* xiii. p. 951 (1844); *Gray, Gen. B.* ii. p. 387 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 111 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 123 (1849); *Bp. Consp.* i. p. 525 (1850); *Gould, B. Asia,* v. pl. 36 (1853); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 454; *Jerd. B. Ind.* ii. p. 388 (1863); *Blyth, Ibis,* 1863, p. 442; *Beavan, Ibis,* 1867, p. 142, 1868, p. 176; *Pelz. Ibis,* 1868, p. 318; *Gray, Hand-l. B.* ii. p. 99, no. 7478 (1870); *Tristr. Ibis,* 1871, p. 232; *Brooks, Str. F.* 1875, p. 255; *Hume, Str. F.* 1879, p. 108; *Salvin, Cat. Strickl. Coll.* p. 203 (1882); *Marshall, Ibis,* 1884, p. 420.

Adult male. General colour above ashy grey, with a purplish band across the lower back, succeeded by a white rump; lesser wing-coverts like the back, with a reddish tinge; median coverts also ashy, with concealed black bases; greater coverts purplish black for the basal half, ashy grey for the terminal half, with a narrow whitish fringe; bastard-wing, primary-coverts, and quills black, with a velvety purplish gloss, especially on the secondaries; upper tail-coverts and centre tail-feathers purplish black; the remainder black, externally purplish; crown of head, nape, and hind neck clear vermilion, separated from the black forehead by a narrow line of ashy, which reaches to above the eye; lores, forehead, feathers below the eye, and the eyelid, as well as the fore part of the cheeks and chin, black; ear-coverts and hinder cheeks pale ashy grey, with a slight wash of red; the rest of the throat ashy grey, tinged with red like the ear-coverts; sides of neck, fore neck, and breast paler vermilion; abdomen ashy grey, whiter towards the vent and under tail-coverts; sides of body pale vermilion like the breast; flanks ashy grey; thighs ashy grey; under tail-coverts white; under wing-coverts and axillaries whitish, the latter more ashy, with a reddish tinge; quills below dusky, ashy whitish along the inner edge: "bill black; legs pale fleshy brown; iris light brown" (*Jerdon*). Total length 5·4 inches, culmen 0·4, wing 3·1, tail 2·4, tarsus 0·7.

Adult female. General colour above drab-brown, rather clearer ashy on the hind neck, dusky on the lower back; rump white; lesser and median wing-coverts ashy or brown tinged with ashy; greater coverts black at base, ashy brown for the terminal third, and fringed with ashy whitish; bastard-wing and primary-coverts ashy grey, the latter edged with black; quills black, edged with velvety black, the inner secondaries purplish black; upper tail-coverts and centre tail-feathers purplish black, the remainder black, edged and tipped with purplish black; crown of head olive-yellow, as well as the occiput and nape; forehead black, separated from the yellow crown by a line of ashy grey; hind neck olive-yellow; lores, fore part of cheeks, feathers round eye, and chin, black; ear-coverts

and hinder cheeks ashy grey, with a tinge of drab; the feathers behind the eye forming a line of buffy whitish; remainder of under surface drab-brown, with a clearer shade of drab on the throat; lower abdomen whitish; sides of body drab-brown; lower flanks white like the rump; thighs drab-brown; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy whitish along the inner edge. Total length 5·7 inches, culmen 0·4, wing 3·05, tail 2·5, tarsus 0·65.

The variation in the colour of the head and breast of the male is immense, from the pale ashy-olive breast, which resembles that of the female, excepting that it has more yellow, to the bright vermilion colour, which is as rich as that of *P. rubicilla*. Between these extremes every possible gradation is found, according to the age of the bird, the prevailing colour being first olive-yellow, then orange, and, lastly, vermilion.

Hab. Himalayas, from the vicinity of Chamba, as far east as Bootan.

a. ♂ imm. sk.	Cashmere, 1866.	Hume Coll.
b. ♂ imm. sk.	Sutlej Valley (*Buck*).	Hume Coll.
c. ♂ ad. sk.	Kotegurh, near Simla, March 15, 1869.	Hume Coll.
d. ♀ ad. sk.	Kotegurh, 1868.	Hume Coll.
e. ♀ ad. sk.	Kotegurh, Jan. 10, 1871.	Hume Coll.
f. ♀ ad. sk.	Simla, 1868.	Hume Coll.
g. *h*, *i*, *j*. ♂ ad.; *k*, *l*, *m*. ♀ ad. sk.	Hutloo, near Narkunda, Oct. 1, 1869.	Hume Coll.
n. ♂ ad.; *o*, *p*. ♂ imm.; *q*, *r*. ♀ ad. sk.	N.W. Himalayas.	Pinwill Coll.
s, *t*. ♂ ad. sk.	Masuri.	Hume Coll.
u, *v*. ♂ ♀ ad. sk.	Middle range of hills north of Masuri.	Hume Coll.
w, *x*. ♂ ad. sk.	Danguli, May 11, 1874 (*W. E. Brooks*).	Hume Coll.
y, *z*. ♂ ad.; *a'*. ♂ imm.; *b'*, *c'*. ♀ ad. sk.	Nepal.	Hodgson Coll.
d'. ♂ ad. sk.	Nepal (*Hodgson*).	India Mus.
e'. ♂ imm. sk.	Native Sikhim, Jan. 1874 (*L. Mandelli*).	Hume Coll.
f', *g'*. ♂ ♀ ad. sk.	Native Sikhim, Jan. 1874 (*L. M.*).	Hume Coll.
h', *i'*, *k'*, *l'*, *m'*. ♂ ad.; *n'*, *o'*, *p'*, *q'*. ♀ ad. sk.	Native Sikhim, March 1878 (*L. M.*).	Hume Coll.
r', *s'*. ♂ imm. sk.	Native Sikhim, March 1878 (*L. M.*).	Hume Coll.
t'. ♂ ad. sk.	Native Sikhim, April 1876 (*L. M.*).	Hume Coll.
u'. ♂ ad. sk.	Native Sikhim, May 1873 (*L. M.*).	Hume Coll.
v'. ♂ ad.; *w'*, *x'*. ♀ ad.; *y'*. ♂ imm. sk.	Sikhim, Jan. 1874 (*L. M.*).	Hume Coll.
z', *a*. ♂ ♀ ad. sk.	Sikhim, Feb. 1878 (*L. M.*).	Hume Coll.
β. ♂ imm.; *γ*. ♀ ad. sk.	Sikhim, March 1876 (*L. M.*).	Hume Coll.
δ, *ε*, *ζ*. ♀ ad.; *η*, *θ*. ♀ ad. sk.	Sikhim, April 1874 (*L. M.*).	Hume Coll.
ι. ♂ imm. sk.	Sikhim, August 1, 1879 (*L. M.*).	Hume Coll.

κ, λ, μ, ν. ♂ imm.; ξ, o. ♀ ad. sk.	Sikhim.	
π. ♂ ad. sk.	Darjiling (*J. Gammie*).	Hume Coll.
ρ. ♂ ad. sk.	Bootan (*Pemberton*).	India Mus.

48. PINICOLA.

	Type.
Pinicola, *Vieill. Ois. d'Amér. Sept.* p. iv (1807)	P. enucleator.
Strobilophaga, *Vieill. Analyse*, p. 29 (1816)	P. enucleator.
Corythus, *Cuv. Règne Anim.* i. p. 391 (1817)	P. enucleator.
Enucleator, *Brehm, Vogelf.* p. 89 (1855)	P. enucleator.

Range. The Northern parts of the Old and New Worlds.

1. Pinicola enucleator.

The Crested Bulfinch, *Edwards, Nat. Hist. B.* iii. pls. 123, 124 (1751).

Le Grosbec de Canada, *Briss. Orn.* iii. p. 250, pl. xii. fig. 3 (1760); *Daubent. Pl. Enl.* iv. pl. 135, fig. 1.

Loxia enucleator, *Linn. Syst. Nat.* i. p. 299 (1766); *Wilson, Amer. Orn.* i. p. 80, pl. 5. fig. 2 (1808); *Meyer u. Wolf, Taschenb.* i. p. 142 (1810); *Yarr. Brit. B.* ii. p. 8 (1843); *Seebohm, Hist. Brit. B.* ii. p. 41 (1884).

Le Dur-bec, *Buff. Hist. Nat. Ois.* iii. p. 457 (1775).

Pine Grosbeak, *Lath. Gen. Syn.* ii. pt. 1, p. 111 (1783).

Loxia flamingo, *Sparrm. Mus. Carls.* i. pl. 17 (1786, var.).

Pinicola rubra, *Vieill. Ois. Amér. Sept.* i. p. iv, pl. i. fig. 13 (1807).

Loxia psittacea, *Pall. Zoogr. Rosso-Asiat.* ii. p. 5 (1811).

Fringilla enucleator, *Meyer, Vög. Lief- u. Esthl.* p. 74 (1815).

Strobilophaga enucleator, *Vieill. N. Dict. d'Hist. Nat.* ix. p. 609 (1817); *Roux, Orn. Provenç.* pl. 72 (1825); *Gray, Gen. B.* ii. p. 387 (1844); *Blyth, Cat. B. Mus. As. Soc.* p. 123 (1849); *Gray, List Brit. B.* p. 109 (1863); *Blakist. & Pryer, Ibis*, 1878, p. 245.

Corythus enucleator, *Cuvier, Règne Anim.* i. p. 391 (1817); *Swains. & Rich. Faun. Bor.-Amer.* ii. *Birds*, p. 262, pl. 53 (1831); *Jard. ed. Wilson, Amer. Orn.* i. p. 79, pl. 5. fig. 2, iii. p. 465, pl. 16. fig. 3 (c. 1832); *Gould, B. Eur.* iii. pl. 204 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 38 (1838); *Audub. B. Amer.* iii. p. 179, pl. 199 (1841); *Bp. & Schl. Monogr. Loxiens*, pls. 11, 12 (1850); *Kjærb. Orn. Dan.* pl. xxviii. *b.* fig. 2, pl. xxviii. *c.* fig. 3 (1852); *Tacz. Bull. Soc. Zool. France*, i. p. 182 (1876); *Finsch, Verh. zool.-bot. Gesellsch. Wien*, 1879, p. 212; *Tacz. Bull. Soc. Zool. France*, vii. p. 394 (1882); *Homeyer & Tancré, Mitth. orn. Ver. Wien*, 1883, p. 90; *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 322 (1885).

Pyrrhula enucleator, *Temm. Man. d'Orn.* i. p. 333 (1820); *Naum. Vög. Deutschl.* iv. p. 403, pl. 112 (1824); *Werner, Atlas, Granivores*, pl. 45 (1827); *Bp. Amer. Orn.* iii. p. 16, pl. 16. fig. 3 (1838); *Macgill. Brit. B.* i. p. 411 (1837); *Audub. B. Amer.* pl. ccclviii.; *id. Orn. Biogr.* iv. p. 414 (1838); *Keys. u. Blas. Wirb. Eur.* p. 159 (1840); *Selys-Longch. Faune Belge*, p. 78 (1842); *Schl. Rev. Crit.* p. 67 (1844); *Hewits. Eggs Brit. B.* i. p. 210*, pl. 53* (1856); *Borggr. Vogelf. Norddeutschl.* p. 74 (1869); *R. Gray, B. West Scotl.* p. 152 (1871); *Fallon, Ois. Belg.* p. 94 (1875); *Newt. ed. Yarr. Brit. B.* ii. p. 177 (1877); *Salvad. Elench. Ucc. Ital.* p. 180 (1887).

Corythus enucleator, *Fleming, Brit. An.* p. 76 (1828); *Bp. Consp.* i. p. 528 (1850); *Sundev. Svensk. Fogl.* pl. ii. figs. 2. 3 (1856); *Degl. et Gerbe, Orn. Eur.* i. p. 258 (1867); *Fritsch, Vög. Eur.* pl. 22. fig. 14 (c. 1870); *Alst. & Harvie Brown, Ibis,* 1873, p. 64; *Seebohm, Ibis,* 1876, p. 115.

Corythus angustirostris &c., *Brehm, Vög. Deutschl.* p. 247 (1831).

Pinicola enucleator, *Cab. in Ersch u. Gruber, Encycl.* 1st sect. i. p. 219 (1849); *id. Mus. Hein.* Th. i. p. 167 (1850); *Licht. Nomencl. Av. Berol.* p. 48 (1854); *Gray, Hand-l. B.* ii. p. 108, no. 7639 (1870); *Gould, B. Gt. Brit.* iii. pl. 44 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 162 (1871); *Harting, Handb. Brit. B.* p. 113 (1872); *Coues, Key N. Amer. B.* p. 127 (1872); *Finsch, Abhandl. nat. Ver. Bremen,* iii. p. 54 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 453, pl. 21. figs. 1, 2 (1874); *Coues, B. N.-West,* p. 104 (1874); *Dresser, B. Eur.* iv. p. 3, pl. 201 (1874); *Ridgw. Proc. U. S. Nat. Mus.* iii. p. 176 (1880); *Giglioli, Ibis,* 1881, p. 204; *Seebohm, Ibis,* 1882, p. 378; *Salv. Cat. Strickl. Coll.* p. 204 (1882); *B. O. U. List Brit. B.* p. 56 (1883); *Stearns, Proc. U. S. Nat. Mus.* vi. p. 117 (1883); *Nelson, Cruise R. S. 'Corwin,'* p. 66 (1883); *Blakist. Amended List B. Japan,* p. 63 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 343 (1884); *Drew, Auk,* ii. p. 15 (1885); *Scton, Auk,* iii. p. 322 (1886); *A. O. U. Check-list N. Amer. B.* p. 255 (1886).

Pinicola canadensis, *Cab. Mus. Hein.* i. p, 167 (1850); *Baird, B. N. Amer.* p. 410 (1858); *Coues, Proc. Philad. Acad.* 1861, p. 221; *Scl. Cat. Amer. B.* p. 122 (1862); *Dall & Bann. Trans. Chicago Acad.* i. p. 281 (1869); *Cooper, B. Calif.* p. 151 (1870).

Pyrrhula (Corythus) enucleator, *Middend. Reis. Sibir., Zool.* p. 150 (1851); *Schrenck, Reis. Amurl.* p. 296 (1860); *Radde, Reis. Sibir., Vög.* p. 187 (1863).

Enucleator angustirostris &c., *Brehm, Vogelf.* p. 89 (1855).

Corythus splendens, *Brehm, t. c.* p. 89.

Corythus enucleator splendens &c., *A. E. Brehm, Verz. Samml. C. L. Brehm,* p. 10 (1866).

Pinicola enucleator, *β.* canadensis, *Belding, Proc. U. S. Nat. Mus.* i. p. 412 (1878).

Corythus enucleator kamtschatkensis, *Dybowski, Bull. Soc. Zool. France,* viii. p. 367 (1883).

Pinicola flammula, *Homeyer, J. f. O.* 1880, p. 156.

Adult male. General colour above rosy crimson, much mottled on the back and scapulars with ashy bases to the feathers, which are also subterminally darker brown: lower back and rump more uniform rosy; lesser wing-coverts like the back; median and greater coverts dusky brown, tipped with pale rosy, whitish on the margins of the latter series; bastard-wing, primary-coverts, and quills dusky brown, margined with pale rosy, whiter on the secondaries, the innermost of which have broader edges; upper tail-coverts ashy, tipped with rose-colour, inclining to white on the lateral ones; tail-feathers dusky brown, with narrow rosy edges; crown of head uniform rosy crimson; nasal plumes and lores dusky blackish, the feathers below the eye hoary; sides of face and under surface of body rosy crimson, extending down the sides of the abdomen, which is dull ashy, becoming whiter on the vent; sides of

body and flanks light slaty grey; thighs ashy; under tail-coverts ashy, tipped and edged with white; under wing-coverts and axillaries ashy grey, the edge of the wing tinged with rosy; quills below ashy, paler along the inner edge. Total length 8·5 inches, culmen 0·65, wing 4·15, tail 3·25, tarsus 0·85.

Adult female. Different from the male and without the rosy colour. General colour above ashy, with dusky lines to the feathers of the back and mantle; lower back and rump uniform ashy; lesser wing-coverts like the back; median and greater coverts dusky brown, edged with white at the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with yellowish white on the primaries, the inner secondaries rather more broadly margined with white; upper tail-coverts like the back but with a slight olive tinge; tail-feathers dusky, edged with olive-brown; crown of head and sides of face golden olive-yellow, spreading over the hind neck on to the mantle; nasal plumes dusky brown; lores hoary whitish; throat and under surface of body ashy grey, washed with golden olive on the throat and breast; lower abdomen and vent a little paler grey; under tail-coverts, under wing-coverts, and axillaries ashy grey, edged with whitish. Total length 8 inches, culmen 0·6, wing 4, tail 3·1, tarsus 0·8.

Young male. Similar to the adult female, but with the yellow colour of an orange tint on the throat, breast, crown, and back; and more plentifully developed.

Hab. The same as that of the genus.

a. ♂ ad. sk.	Sweden.	Hume Coll.
b, c. ♀ ad. sk.	Norway, October (*R. Collett*).	Christiania Mus. [P.].
d, e. ♂ ♀ ad. sk.	Norway (*Esmark*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Quickiock, Lapland, May 17, 1862 (*H. Wheelwright*).	Gould Coll.
f'. ♂ juv. sk.	Quickiock, April 26, 1862 (*H. W.*).	Gould Coll.
g, h. ♂ ♀ ad. st.	Archangel.	R. B. Sharpe, Esq. [P.].
i, k. ♂ ♀ ad. sk.	Archangel, June.	Hume Coll.
l. ♂ ad.; *m.* ♂ juv. sk.	Archangel, December.	Hume Coll.
n. [♂] juv. sk.	N. America.	Sclater Coll.
o. ♀ ad. sk.	Arctic America.	Sir G. Back [P.].
p. ♂ ad. sk.	Repulse Bay.	Dr. Rae [P.].
q. ♂ ad. sk.	Nova Scotia.	Sclater Coll.
r. ♀ ad. sk.	New Jersey (*H. E. Dresser*).	Hume Coll.
s. ♀ ad. sk.	Madison Co., New York, Dec. 28, 1868 (*Smith*; Sm. no. 77189).	U. S. Nat. Museum [P.].
t. ♂ ad. sk.	Houlton, Maine (*R. M. McLeod*; Sm. no. 68697).	U. S. Nat. Museum [P.].
u. ♀ ad. sk.	Michigan, Feb. 2, 1875 (*R. M. Gibbs*).	H. K. Coale, Esq. [P.].
v. ♀ ad. sk.	"Bitter Root Valley" (*J. Pearsall*; Sm. no. 17573).	Salvin-Godman Coll.
w. ♂ juv. sk.	Canada.	Gould Coll.

x, *y*. ♂ ♀ ad. sk.	Hamilton, Canada, Feb. 1885 (*K. C. McIlwraith*).	R. B. Sharpe, Esq. [P.].
z, *a'*. ♂ ♀ ad. sk.	Fort Dufferin, Manitoba (*G. Dawson*).	N. A. Boundary Comm. [P.].
b'. ♂ juv. sk.	Bear Lake.	B. R. Ross, Esq. [P.].
c'. ♂ ad. sk.	Fort Simpson, Oct. 13 (*R. Kennicott*; Sm. no. 19581).	Salvin-Godman Coll.
d', *e'*. ♂ ♀ ad. sk.	Fort Yukon, Alaska, Sept. 24, 1876 (*L. M. Turner*; Sm. nos. 72275, 73265)	U. S. Nat. Museum [P.].

49. PROPYRRHULA.

Type.

Propyrrhula, *Hodgs. J. A. S. Beng.* xiii. p. 952 (1844) ..... P. subhimalayensis.

Range. Himalaya Mountains.

1. Propyrrhula subhimalayensis *.

Corythus subhimachalus, *Hodgs. Asiatic Researches*, xix. p. 152 (1836); *Bp. & Schl. Monogr. Loxiens*, p. 11, pl. 13 (1850); *Bp. Consp.* i. p. 528 (1850).

Corythus subhemalayensis, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 305. figs. 1, 2.

Propyrrhula subhemachalana, *Hodgs. J. A. S. Beng.* xiii. p. 952 (1844); *id. in Gray's Zool. Misc.* p. 82 (1844).

Strobilophaga subhimachala, *Gray, Gen. B.* ii. p. 387 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 454 (1846).

Spermopipes subhimachalus, *Licht. Nomencl. Av.* p. 48 (1854).

Propyrrhula subhimachalana, *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 454 (1856).

Propyrrhula subhemalacha, *Jerd. B. Ind.* ii. p. 396 (1863); *Blyth, Ibis*, 1867, p. 44; *Hume, Str. F.* 1879, p. 108.

Pinicola subhemachala, *Gray, Hand-l. B.* ii. p. 109, no. 7642 (1870).

Adult male. General colour above dark crimson, slightly mottled with dusky centres to the feathers, the rump and upper tail-coverts uniform; lesser wing-coverts like the back; median and greater coverts dusky brown, externally pale crimson; bastard-wing and primary-coverts dusky brown, narrowly fringed with dull crimson; quills dusky brown, the primaries edged with dull crimson, some of the secondaries with olive-yellow, the inner ones with pale rosy, ashy whitish towards the ends; tail-feathers dusky brown, edged with dull crimson; crown of head like the back, with a band of bright crimson across the forehead, extending over the eye; lores dusky; feathers round eye pale crimson; ear-coverts dark crimson

* I propose that the specific name of this species should be rendered as above, to avoid confusion. Hodgson called it the "Sub-himalayan Finch;" but by giving it the unusual name of *subhimachalus* and afterwards that of *subhemachalana*, it is not surprising that subsequent writers mistook the origin of the specific name, and reduced it to *subhemalacha* or *subhimachalana*. To his original drawing he has attached the name *subhemalayensis*, and as this best expresses the specific signification, I propose to retain it, instead of the other ones, which are apparently varied readings of a misprint.

like the sides of the neck; cheeks and throat brighter crimson; fore neck mottled with pale rosy, the feathers edged with dark crimson; breast and abdomen dark ashy grey, like the sides of body and flanks, the upper breast washed with pale crimson, the lower abdomen whitish; thighs ashy; under tail-coverts ashy, slightly tinged with rosy, the long ones with dusky brown bases; under wing-coverts and axillaries ashy, edged with pale crimson; quills below dusky, ashy along the inner edge. Total length 7 inches, culmen 0·5, wing 4, tail 3, tarsus 0·9.

Adult female. Different from the male. General colour above dull olive-yellow, mottled with dusky bases to the feathers; lower back, rump, and upper tail-coverts uniform olive-yellow; lesser wing-coverts like the back; median and greater coverts dusky brown, externally olive-yellow, brighter towards the ends; bastard-wing, primary-coverts, and quills dusky brown, fringed with olive-yellow, more broadly on the secondaries, the inner ones ashy towards the ends; tail-feathers dusky brown, fringed with olive-yellow; crown of head ashy grey, with dusky centres to the feathers; the forehead olive-yellow, brighter above the lores; lores, feathers below the eye, and fore part of cheeks hoary grey; eyelid olive-yellow; ear-coverts and sides of neck dark ashy grey, as well as the hinder cheeks; chin hoary grey, mottled with dusky bases; lower throat dark ashy grey; fore neck and chest olive-yellow, with dusky bases; breast, sides of body, and flanks dark ashy grey, lighter on the abdomen; thighs ashy grey; under tail-coverts also ashy grey, with pale ashy edges; under wing-coverts and axillaries ashy grey, edged with olive-yellow, especially on the edge of the wing; quills below dusky, ashy along the inner edge: "bill and legs brownish flesh-colour with a rosy tinge; iris brown" (*B. H. Hodgson*). Total length 8 inches, culmen 0·55, wing 3·65, tail 3, tarsus 0·8.

Old females become orange on the forehead and on the fore neck, and vary according to age in the brightness of the olive-yellow on the lower back and rump. The hinder crown is often olive-yellow like the back, instead of being ashy grey; soft parts "as in the male, but duller" (*B. H. Hodgson*).

Young males at first resemble the old female, and have the forehead and fore neck orange. The second plumage seems to be like that of the fully adult male, but the markings on the chest are yellow slightly tinged with crimson, and there is a little of the latter colour on the olive-yellow of the back as well as on the sides of the face. The full plumage seems to take some time to acquire, as many of the crimson-throated birds often show traces of the olive-yellow stage. As with many of the Grosbeaks, the crimson mottling on the chest becomes abraded, and this part is often nearly uniform.

Hab. Himalayas from Nepal to Sikhim.

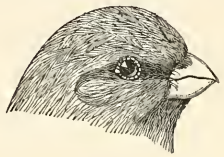
a, b. ♂ ♀ ad. sk.	Nepal.	Hodgson Coll. (Types of species.)
c, d. ♂ ♀ ad. sk.	Nepal.	Hodgson Coll.

e. ♂ ad. sk.	Dolaka, Nepal, Dec. 1875 (*L. Mandelli*).	Hume Coll.
f–*l.* ♂ ad.; *m*–*r.* ♀ ad. sk.	Dolaka, Nepal, Jan. 1875–76 (*L. Mandelli*).	Hume Coll.
s. ♂ ad. sk.	Dolaka, Nepal, Feb. 1876 (*L. Mandelli*).	Hume Coll.
t. ♂ juv. sk.	Native Sikhim, March 1874 (*L. Mandelli*).	Hume Coll.
u, *v.* ♂ ad.; *w.* ♂ juv.; *x*, *y*, *z.* ♀ ad. sk.	Sikhim, Feb. 1874 (*L. Mandelli*).	Hume Coll.
a'. ♀ ad. sk.	Sikhim, March 1872 (*L. Mandelli*).	Hume Coll.
b'. ♂ ad.; *c'*–*h'.* ♀ ad. sk.	Darjiling, 1870.	Hume Coll.

50. URAGUS.

Type.

Uragus, *Keys. & Blas. Wirb. Eur.* p. xl (1840) ..... U. sibiricus.



Head of *Uragus sibiricus.*

Range. North-eastern Siberia, Japan, and Northern China.

Key to the Species.

a. Flanks rosy; head uniform.
  a'. Larger; colours paler ..... *sibiricus*, p. 464.
  b'. Smaller; colours richer..... *sanguinolentus*, p. 466.
b. Flanks brown; head mottled with dusky bases to the feathers ..... *lepidus*, p. 467.

1. Uragus sibiricus.

Loxia sibirica, *Pall. Reis. Russ. Reichs*, ii. Anhang, p. 711 (1771).
Siberian Grosbeak, *Lath. Gen. Syn.* ii. pt. i. p. 124 (1783).
Pyrrhula caudata, *Pall. Zoogr. Rosso-Asiat.* ii. p. 10 (1811).
Pyrrhula longicauda, *Temm. Man. d'Orn.* i. p. 340 (1820); *Werner, Atlas, Granivores*, pl. 35 (1837).
Corythus longicauda, *Gould, B. Eur.* iii. pl. 205 (1837).
Corythus sibiricus, *Bp. Comp. List B. Eur. and N. Amer.* p. 38 (1838).
Pyrrhula (Uragus) sibirica, *Keys. u. Blas. Wirb. Eur.* p. xl (1840); *Schrenk, Reis. Amurl.* p. 290 (1859); *Radde, Reis. Sibir., Vög.* p. 181 (1863).
Uragus sibiricus, *Gray, Gen. B.* ii. p. 387 (1844); *Bp. Consp.* i. p. 529 (1850); *id. & Schl. Monogr. Loxiens*, pls. 34, 35 (1850); *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871); *Gray, Hand-l. B.* ii. p. 102, no. 7529 (1870); *Swinh. P. Z. S.* 1871, p. 387; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dresser, Ibis*, 1875, p. 245; *Prjev. in Rowley's Orn. Misc.* ii. p. 304 (1877); *Tacz. Bull. Soc. Zool.*

France, i. p. 182 (1876); *David & Oust. Ois. Chine*, p. 357 (1877); *Seebohm, Ibis*, 1880, p. 187; *Gould, B. Asia*, v. pl. 27 (1883).
Erythrothorax caudatus, *Brehm, Naum.* 1855, p. 276.
Pyrrhula sibirica, *Borggr. Vogelf. Norddeutschl.* p. 73 (1869).

Adult male. General colour above rosy, the feathers of the mantle and back centred with black and edged with hoary whitish; lower back and rump uniform rosy; lesser wing-coverts dull rosy; median coverts white; greater coverts blackish, broadly tipped with white, the inner ones white for the terminal half; bastard-wing and primary-coverts dusky brown, edged with ashy brown; quills dusky brown, edged with whitish, the inner secondaries broadly margined and tipped with white; upper tail-coverts dull rosy, with dusky bases; tail-feathers blackish, edged with ashy whitish, the three outer feathers white, with black shafts and a black edging to the base of the inner web, increasing in extent towards the centre of the tail; crown of head pearly white with a rosy tinge, the occiput and nape ashy brown, tinged with rosy, more distinct on the hind neck; base of forehead and lores deep crimson, as well as the feathers below the eye; eyebrow pearly white; ear-coverts and cheeks pearly white with a rosy tinge, as also the throat and fore neck, the feathers of the latter parts being lanceolate; remainder of under surface of body rosy, the sides of the upper breast slightly mottled with blackish bases; lower abdomen white, tinged with rosy; sides of body clear rose-colour, the lower flanks white; thighs ashy; under tail-coverts pale rose-colour; under wing-coverts and axillaries ashy white, with a rosy tinge on the edge of the wing; quills below pale brown, whitish along the inner edge: "bill clear brown, the lower mandible whitish; feet reddish grey; iris brown" (*A. David*). Total length 6·2 inches, culmen 0·35, wing 2·95, tail 3·5, tarsus 0·65.

Adult female. Different from the male. General colour above sandy brown, with blackish-brown centres to the feathers; rump and lower back more uniform and washed with vermilion; lesser wing-coverts ashy brown; median coverts white; greater coverts black, broadly tipped with white; bastard-wing and primary-coverts dark brown; quills brown, edged with pale brown, the inner secondaries broadly edged with white; upper tail-coverts brown, with a slight reddish tinge; tail-feathers dark brown, the two outer feathers white, with dark-brown shafts and an edging of dark brown near the base of the inner web, less pronounced on the outer feather; the third feather with a long wedge-shaped white mark extending halfway down the inner web from the top; crown of head rather paler brown than the back and less distinctly streaked with dusky; base of forehead and lores ashy whitish, as also the fore part of the cheeks; ear-coverts light brown, indistinctly streaked with darker brown; cheeks and throat ashy whitish, streaked with dark brown; remainder of under surface of body pale sandy brown with a faint rosy tinge, the fore neck and breast narrowly streaked with blackish brown; abdomen white; sides of body and flanks like the breast,

but the stripes rather narrower; thighs ashy white; under tail-coverts dull white; under wing-coverts and axillaries white; quills below dusky, white along the inner edge. Total length 6·7 inches, culmen 0·4, wing 2·7, tail 3·2, tarsus 0·65.

Young males resemble the old females, but are more uniform, being scarcely streaked above and not at all on the under surface; the rump is orange, and the under surface is tinged with orange or light rose-colour.

Hab. Eastern Siberia, Manchuria, and Northern China, westwards to Krasnoyarsk and Turkestan.

a, *b*. ♂ ♀ ad. sk.	Amoor-Land (*Dr. Maack*).	Gould Coll.
c. ♂ ad. sk.	Kultuk, Lake Baikal, March 2.	Purchased.

2. Uragus sanguinolentus.

Pyrrhula sanguinolentus, *Temm. & Schl. Faun. Jap., Aves*, pls. 54, 54 B (1850).

Uragus sanguinolentus, *Bp. & Schl. Monogr. Loxiens*, pl. 36 (1850); *Bp. Consp.* i. p. 529 (1850); *Blakist. Ibis*, 1862, p. 328; *Whitely, Ibis*, 1867, p. 203; *Gray, Hand-l. B.* ii. p. 102, no. 7530 (1870); *Dybowski, J. f. O.* 1873, p. 95; *Swinh. Ibis*, 1874, p. 160; *Tacz. Bull. Soc. Zool. France*, i. p. 182 (1876); *David & Oust. Ois. Chine*, p. 359 (1877); *Tacz. Bull. Soc. Zool. France*, iii. p. 139 (1878); *Blakist. & Pryer, Ibis*, 1878, p. 245; *iid. B. Japan*, p. 175 (1882); *Blakist. Amended List B. Japan*, pp. 18, 63 (1884).

Pyrrhula (Uragus) sibiricus, *Radde, Reis. Sibir.* p. 181 (1883).

Adult male. General colour above rose-colour, more or less shaded with ashy, the mantle and back streaked with black centres to the feathers; lower back and rump deep rosy, approaching carmine on the upper tail-coverts, which are tipped with white; lesser wing-coverts deep rosy; median coverts white, tinged with rosy; greater coverts black, broadly tipped with white, on which is a rosy tinge; bastard-wing, primary-coverts, and quills black, edged with rosy, the secondaries broadly margined and tipped with white; tail-feathers black, edged with ashy, the three outer ones almost entirely white, with black shafts and a black edging towards the base of the inner web; crown of head nearly uniform ashy, with a concealed rosy tinge; the forehead with a pearly gloss; lores and a narrow line across the base of the forehead deep crimson; ear-coverts, cheeks, and throat pearly white with a rosy tinge, the feathers of the latter part somewhat lanceolate, as also those of the fore neck, which, with the rest of the under surface, is bright rosy pink; lower abdomen hoary whitish; sides of body and flanks, as well as the under tail-coverts, rosy pink; thighs ashy whitish; under wing-coverts and axillaries pearly white, with a strong tinge of rosy; quills below dusky, whitish along the inner edge: "bill horn-brown; legs and toes horn-brown; iris dark hazel" (*H. Whitely*). Total length 5·7 inches, culmen 0·35, wing 2·85, tail 3·1, tarsus 0·65.

Adult female. Similar to the female of *U. sibiricus*, but smaller and very much darker, the brown of the underparts much deeper. Total length 5·7 inches, culmen 0·35, wing 2·5, tail 2·8, tarsus 0·65.

Hab. Eastern Siberia, Manchuria, Japan, and the Kurile Islands.

a. ♂ ad. sk.	Vladiowstok, Jan. 19.	Dr. Lenz.
b. ♀ ad. sk.	Vladiowstok, Dec. 4.	Dr. Lenz.
c. ♂ ad. sk.	Amoor-Land, March.	Dr. Lenz.
d. ♀ ad. sk.	Yokohama, Japan.	Prof. Milne [C.].
e. ♀ ad. sk.	Hakodadi, Oct. 19, 1865 (*H. Whitely*).	Gould Coll.
f. ♀ ad. sk.	Hakodadi, Dec. 31, 1864.	H. Whitely [C.].
g. ♂ ad. sk.	Hakodadi, Nov. 6, 1884.	H. Whitely [C.].

3. Uragus lepidus.

Uragus lepidus, *David & Oust. Ois. Chine*, p. 359 (1877).

Adult male (type of species). General colour above brown, the feathers of the back and mantle broadly centred with black and washed with dark crimson; lower back and rump uniform deep rosy; lesser wing-coverts dark rosy, the feathers with blackish bases; median and greater coverts blackish, edged with ashy and broadly tipped with creamy white, forming a dark wing-bar; bastard-wing, primary-coverts, and quills dark brown, edged with lighter brown, more ashy on the primaries; inner secondaries broadly edged with ashy white on the outer web; upper tail-coverts dark ashy; tail-feathers blackish, edged with ashy, the two outer feathers white for the most part, except for an oblique blackish mark along the inner web and along the outer web, the external feather white along the outer web, with a blackish shaft; crown of head ashy brown with a slight rosy tinge, all the feathers mottled with dusky centres; fore part of the head silvery white with a rosy tinge, the feathers slightly mottled with dusky spots; lores and base of forehead dark crimson; eyebrow silvery white, continued from the frontal band; sides of face, ear-coverts, cheeks, and throat silvery whitish with a rosy tinge, somewhat lanceolate on the throat; sides of neck ashy grey, mixed with rosy spots; fore neck and breast deep rose-colour, the abdomen dull whitish; sides of body and flanks sandy brown, streaked with dark brown; thighs ashy brown; under tail-coverts whitish, tinged with rosy; under wing-coverts ashy whitish, washed with rosy; axillaries white; quills below dusky, ashy whitish along the inner edge. Total length 5·8 inches, culmen 0·35, wing 2·6, tail 2·4, tarsus 0·6. (*Mus. Paris.*)

Differs from the other species of *Uragus* in having the crown mottled with dusky bases to the feathers, less broad bands of white on the wings, and also by its brown flanks, which are streaked with blackish brown.

The *female* resembles that of *U. sanguinolentus*, but is more ashy and has none of the tawny tinge on the lower back and rump which is seen on the last-named species; the sides of the body and flanks are also brown, streaked with blackish brown, more coarsely than in *U. sanguinolentus*. Total length 5·5 inches, culmen 0·35, wing 2·55, tail 2·65, tarsus 0·65. (*Mus. Paris.*)

Hab. China.

Subfamily III. EMBERIZINÆ.

The following "Key" to the genera of Buntings is more artificial than natural, for the characters occur and recur in different sections, so as to separate considerably genera, the near relations of which are obvious. Thus it happens that an arrangement in natural order, according to characters, has proved impossible; but at the same time I believe that some of the genera have been brought into their natural proximity for the first time, while I have made use of the pattern of coloration as a character of considerable value in some Buntings.

Key to the Genera.

A. Hind claw never longer than the hind toe.
  a. Tail longer than the wing, and generally strongly graduated.
    a'. Bill slender; the depth of the bill at nostrils not so great as the length of the hind claw.
      a''. Bill short, the tarsus twice the length of the culmen; nostril operculated; with rose-colour on the breast and tail ..... 51. Urocynchramus, [p. 472.
      b''. Bill longer, the culmen more than half the length of the nostril; no red in the plumage.
        a'''. Centre tail-feathers acuminate 83. Coryphospiza, p. 765.
        b'''. Centre tail-feathers rounded at the ends.
          *a*⁴. Hind claw much shorter than hind toe ..... 82. Embernagra, p. 757.
          *b*⁴. Hind claw very large, almost equal to the hind toe ..... 77. Chamæospiza, p. 730.
    b'. Bill stouter, the depth of the bill at nostrils greater than the length of the hind claw.
      c''. Tail-feathers acuminate ..... 84. Emberizoides, p. 768.
      d''. Tail-feathers rounded at the ends of the inner web.
        c'''. Bill nearly straight from the nostrils to the tip; claws stout and little curved.
          *c*⁴. Middle claw blunt like the hind claw, which it about equals 80. Atlapetes, p. 738.
          *d*⁴. Middle claw less than the hind claw ..... 81. Pipilo, p. 740.
        d'''. Bill curved from the nostrils to the tip of the culmen; claws stout and greatly curved .... 79. Saltatricula, p. 737.
  b. Wing longer than the tail, or equal to it.
    c'. Wing and tail nearly equal in length, the wing not exceeding the tail by more than the length of the culmen.

e''. Nostrils exposed, and with a more or less distinct operculum.
e'''. Bill stout, deeper than it is broad at nostrils.
e^4. First primary longer than the secondaries.
a^5. Hind claw not double the size of the middle claw, which is curved and sharp.
a^6. Back uniform.
a^7. With more or less of a crest (red)..... 98. Paroaria, p. 809.
b^7. With no crest.
a^8. Colour uniform above and below..... 65. Haplospiza, p. 626.
b^8. Colour variegated.
a^9. Throat white; a white patch at the end of the inner web on the outer tail-feather 92. Diuca, p. 800.
b^9. Throat black; tail uniform or with only a white edge to the outer tail-feather ..... 66. Amphispiza, p. 627.
b^6. Back spotted, and general aspect Sparrow-like.... 62. Zonotrichia, p. 596.
b^5. Hind claw double the size of the middle claw, which is small and worn ..... 87. Nesospiza, p. 779.
f^4. First primary about equal to the outer secondaries.
c^5. Innermost secondaries very long, about equal to primaries ..... 64. Porphyrospiza, [p. 625.
d^5. Primaries decidedly longer than inner secondaries.
c^6. Tail nearly square; back uniform..... 93. Coryphospingus, [p. 802.
d^6. Tail much graduated; the feathers attenuated, especially the centre ones; back mottled and spotted like a true Bunting .... 76. Hæmophila, p. 721.
g^4. First primary less than the secondaries.
e^6. Head with no crest; outstretched feet nearly reaching to end of tail.. 78. Pyrgisoma, p. 731.
f^6. Head with a long occipital crest; outstretched feet not reaching beyond half the tail ..... 99. Gubernatrix, p. 815.

f''. Bill more slender, about equal in height and breadth at nostrils.
h^4. Nostrils exposed entirely, longitudinal, with a very distinct operculum; bill long and slender ..... 91. XENOSPINGUS, p. 799.
i^4. Bill stout, only the nasal aperture exposed; the base of the nostrils covered with plumelets.
e^5. Wing very much rounded; first long primary less than the long secondaries, which equal the primaries in length ..... 72. AMMODROMUS, [p. 683.
f^5. Wing rounded, the first long primary equal to the long secondaries, which, however, are shorter than the primaries.
g^6. Tail somewhat forked, the centre attenuated towards the tips; bill very slender ..... 67. POOSPIZA, p. 632.
h^6. Tail square, graduated laterally; centre tail-feathers rounded at the ends; bill stouter .... 74. PEUCÆA, p. 708.
f''. Nostrils hidden by small bristly plumes.
g'''. First long primary equal to the inner secondaries ..... 73. MELOSPIZA, p. 696.
h'''. First long primary much longer than the inner secondaries.
k^4. Tail without any white pattern on it; bill elongated and pointed ..... 69. SPIZELLA, p. 657. / 55. FRINGILLARIA, [p. 557.
l^4. Tail with a white pattern on the outer feathers.
g^5. With a long occipital crest 56. MELOPHUS, p. 568.
h^5. With no occipital crest.
i^6. Bill pointed, the genys about equal to the hind toe without claw..... 53. EMBERIZA, p. 476.
k^6. Bill rounded and Bullfinch-like, the genys less than the hind toe without claw ..... 52. PYRRHULORHYNCHA, [p. 473.
d'. Wing decidedly longer than the tail, exceeding it by more than the length of the culmen.
g''. Wings falling short of tail by more than the length of the tarsus.
i'''. First primary longer than the secondaries.

m^4. Inner secondaries elongated and Lark-like.
  i^5. Tail forked.
    l^6. Genys ascending at a much greater angle than the end of the culmen; bill curved ..... 54. MILIARIA, p. 552.
    m^6. Genys and culmen at about the same angle; bill pointed ..... 71. PASSERCULUS, p. 674. 70. POŒCETES, p. 670.
  k^5. Tail rounded or square; bill massive, higher than broad at nostrils.
    n^6. Inner secondaries as long as the primaries ..... 61. CALAMOSPIZA, p. 593.
    o^6. Inner secondaries not produced to the same length as primaries ..... 60. CHONDESTES, p. 590.
n^4. Inner secondaries not greatly elongated.
  l^5. First primary as long as the second or longer; wing pointed.
    p^6. Tail-feathers acuminate, sharply pointed at ends. 85. SPIZA, p. 770.
    q^6. Tail-feathers gently rounded at the ends ..... 86. PSEUDOCHLORIS, [p. 774.
  m^5. First primary shorter than the second or third.
    r^6. With no white on the outer tail-feathers.
      c^7. With the back uniform, not streaked.
        c^8. Bill very long; culmen exceeding length of middle toe and claw 97. RHODOSPINGUS, [p. 808.
        d^8. Culmen not so long as middle toe and claw.
          c^9. An elongated occipital crest .... 94. LOPHOSPINGUS, p. 805. 96. TIARIS, p. 807.
          d^9. No occipital crest.
            a^{10}. Culmen decidedly rounded; with a distinct curve on the cutting-edge of the upper mandible ..... 63. CYANOSPIZA, p. 613.
            b^{10}. Bill very pointed; culmen nearly straight, and the cutting-edge of wing also .... 88. PHRYGILUS, p. 780†. 90. SPODIORNIS, p. 798.
      d^7. With the back streaked 75. PASSERELLA, p. 716.

† 89. For *Idiopsar*, which is probably allied to *Phrygilus*, see p. 797.

s^8. With white on the outer tail-feather ..... 68. Junco, p. 646.

k'''. First primary about equal to secondaries; head crested.... 95. Schistospiza, p. 806.

h''. Wings reaching nearly to the end of the tail, falling short by less than the length of the tarsus .. } 57. Plectrophenax, [p. 572. 59. Rhyncophanes, [p. 589.

B. Hind claw longer than the hind toe .... 58. Calcarius, p. 579.

51. UROCYNCHRAMUS.

Type.

Urocynchramus, *Prjevalski, in Rowley's Orn. Misc.* ii. p. 309 (1877) ..... U. pylzowi.

Bill of *Urocynchramus pylzowi*.

Range. Western China.

1. Urocynchramus pylzowi.

Urocynchramus pylzowi, *Prjev. in Rowley's Orn. Misc.* ii. p. 309, pl. vii. (1877); *Gould, B. Asia*, v. pl. 32 (1879).

Adult male. General colour above sandy brown, the feathers centred with black; lesser wing-coverts reddish brown; median coverts black, edged broadly with reddish brown; greater coverts and bastard-wing black, edged with sandy buff, paler at the ends; primary-coverts dusky brown, fringed with reddish brown; quills blackish brown, edged with whity brown, the inner secondaries with reddish brown; upper tail-coverts like the back; tail-feathers dark brown, broadly edged with whity brown, the four outer feathers rosy, tipped with white, the third feather with an oblique brown mark near the end of the inner web, larger on the fourth feather; crown of the head like the back, and similarly streaked; nape and hind neck rather paler and more fulvescent; lores and a narrow eyebrow rosy, or ashy with a rosy tinge, as also the feathers round the eye and sides of face; ear-coverts ashy, tinged with rosy, browner on the upper edge; cheeks and under surface of body pale rosy, the throat and breast washed with hoary whitish edges to the feathers; abdomen whitish, with a rosy tinge; sides of body and flanks pale brown, streaked with black centres to the feathers; thighs ashy ochreous; under tail-coverts rosy; under wing-coverts and axillaries ashy white, washed with rosy near the edge of the wing; quills below dusky, the inner edge reddish ashy. Total length 6 inches, culmen 0·45, wing 2·8, tail 3·1, tarsus 0·9.

Hab. Western China.

a. ♂ ad. sk. Kokonoor, October. General Prjevalski [C.].

52. PYRRHULORHYNCHA.

Type.
Pyrrhulorhyncha, *Giglioli, Ibis,* 1865, p. 58 ..... P. palustris.

Range. The countries bordering the Mediterranean, thence from Astrachan to Yarkand in suitable localities, reappearing again in Japan.

Key to the Species.

a. Larger: wing 3–3·5 inches.
  a'. Sides of body distinctly streaked with blackish or dark chestnut stripes ..... *palustris*, p. 473.
  b'. Sides of body perfectly uniform or with obsolete reddish shaft-lines ..... *pyrrhuloides*, p. 475.
b. Smaller: wing 3·1–3·2 inches; sides of body uniform, without any shaft-streaks ..... *pyrrhulina*, p. 475.

1. Pyrrhulorhyncha palustris.

Emberiza palustris, *Savi, Orn. Tosc.* ii. p. 91 (1829), iii. p. 225 (1831); *Roux, Orn. Prov.* pl. 114 bis; *Bp. Faun. Ital., Ucc.* pl. xi. (1832); *Temm. Man. d'Orn.* iii. p. 220 (1835); *Werner, Atlas, Granivores,* pl. to p. 220; *Gould, B. Eur.* iii. pl. 182 (1837); *Gray, Gen. B.* ii. p. 377 (1844); *Powys, Ibis,* 1860, p. 139; *Elwes & Buckley, Ibis,* 1870, p. 194; *Salvad. Elench. Ucc. Ital.* p. 167 (1887).
Schœnicola intermedia, "*Michah.*," *Bp. Rev. Crit.* p. 164 (1850); *id. Consp.* i. p. 465 (1850).
Schœnicola pyrrhuloides (*nec Pall.*), *Bp. Rev. Crit.* p. 164 (1850); *id. Consp.* i. p. 463 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 168 (1859); *Doderl. Avif. Sicil.* p. 90 (1869).
Cynchramus pyrrhuloides, *Cab. Mus. Hein.* Th. i. p. 130; *Brehm, Vogelf.* p. 115 (1855); *Degl. & Gerbe, Orn. Eur.* i. p. 325 (1867).
Cynchramus palustris &c., *Brehm, Vogelf.* p. 115 (1855).
Emberiza intermedia, *Selys-Longch. Naum.* 1856, p. 387; *Shelley, B. Egypt,* p. 147, pl. 3. fig. 2 (1872).
Pyrrhulorhyncha palustris, *Giglioli, Ibis,* 1865, p. 58.
Emberiza pyrrhuloides (*nec Pall.*), *Salvad. Faun. Ital., Ucc.* p. 144 (1871); *Saunders, Ibis,* 1871, p. 218; *Irby, B. Gibr.* p. 225 (1875); *Danf. & Harvie Brown, Ibis,* 1875, p. 312; *Gigl. Ibis,* 1881, p. 202; *id. Avif. Ital.* p. 54 (1886).
Citrinella pyrrhuloides (*nec Pall.*), *Gray, Hand-l. B.* ii. p. 114, no. 7709 (1870).
Citrinella intermedia, *Gray, Hand-l. B.* ii. p. 114, no. 7710 (1870).
Cynchramus intermedius, *Heugl. Orn. N.O.-Afr.* i. p. 668 (1870).

Adult male. General colour above reddish brown, the feathers of the mantle and back blackish, edged with rufous-brown, and sandy-buff margins; lower back, rump, and upper tail-coverts uniform ashy; lesser and median coverts chestnut, with black bases to the feathers; greater coverts blackish, edged with rufous, sandy whitish on the margins; bastard-wing, primary-coverts, and quills dusky brown, externally pale brown, the primaries rufous at the base of the outer web, and sandy white for the rest of its extent; upper tail-coverts a little browner grey than the rump; two centre tail-feathers dark brown, margined with reddish brown towards the

base and with whitish towards the ends; remainder of feathers blackish, edged with whity brown, the penultimate feather with a large wedge-shaped white mark on the inner web, increasing largely in extent on the outermost, which is almost entirely white, with an oblique mark on the inner web, and with the shaft also brown, widening out towards the end of the outer web; crown of head black; hind neck white, grey as it approaches the mantle; lores, feathers round eye, and ear-coverts black; cheeks white, as well as the sides of the neck; fore part of cheeks and throat black, descending on to the centre of the fore neck and chest; remainder of under surface white; sides of body and flanks narrowly striped with brown; sides of upper breast ashy; thighs brown; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy whitish on the inner edge. Total length 6·5 inches, culmen 0·55, wing 3·3, tail 2·9, tarsus 0·85.

The *adult male in winter* is much more rufous than in summer on the wings, the edges of the feathers on the head and throat sandy brown, obscuring the black.

Adult female. Different from the male. General colour above blackish, the feathers edged with rufous-brown, the extreme margins creamy buff; lower body and rump ashy grey, the former a little streaked with blackish; lesser and median coverts rufous, the latter with black bases; greater coverts black, edged with rufous, the inner ones with sandy buff; bastard-wing blackish, narrowly edged with rufous; primary-coverts and quills blackish, edged with rufous, the innermost with sandy buff; upper tail-coverts ashy, with dusky brown centres; tail-feathers as in the male; crown of head black, the feathers edged with rufous-brown; hind neck ashy, mottled with dark brown centres to the feathers; lores whitish, as well as an eyebrow, the latter with a rufous tinge; ear-coverts blackish brown, tinged with rufous, with a whitish patch below the eye; cheeks dull white, as well as the throat, separated by a malar streak of black, widening out on the sides of the lower throat; fore neck and rest of under surface dull white, tinged with rufous on the chest; sides of body and flanks browner and streaked with blackish; thighs sandy brown; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy whitish along the inner edge. Total length 6 inches, culmen 0·45, wing 3, tail 2·65, tarsus 0·8.

P. intermedia, of which form Capt. Shelley has lent me a specimen, is a somewhat smaller form. Total length 5·8 inches, culmen 0·5, wing 3, tail 2·4, tarsus 0·75.

Hab. Marshy localities in the northern countries bordering the Mediterranean. A slightly smaller race appears to inhabit Egypt.

a. ♂ ad. sk.	South Europe.	Gould Coll.
b, c. ♂ ad. sk.	South Europe.	Zoological Society.
d, e. ♂ ♀ ad. sk.	Pisa, Italy (*Prof. Savi*).	Prof. H. H. Giglioli [P.].
f. ♂ ad. sk.	Sicily.	M. Verreaux.

2. Pyrrhulorhyncha pyrrhuloides.

Emberiza pyrrhuloides, *Pall. Zoogr. Rosso-Asiat.* ii. p. 49 (1811); *Gray, Gen. B.* ii. p. 377 (1844); *Eversm. J. f. O.* 1853, p. 291; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dresser, Ibis*, 1875, p. 249; *Scully, Str. F.* 1876, p. 166; *Finsch, Ibis*, 1877, p. 53; *Dresser, B. Eur.* iv. p. 249, pl. 222. figs. 2, 3 (1878); *Gätke, Ibis*, 1879, p. 378; *Seebohm, Ibis*, 1882, p. 218; *id. Ibis*, 1883, p. 11; *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90.
Emberiza caspia, *Ménétr. Cat. Rais. Cauc.* p. 41 (1832).
Schœnicola pyrrhuloides, *Tacz. Bull. Soc. Zool. France*, i. p. 177 (1876).
Pyrrhulorhyncha pyrrhuloides, *Finsch, Verh. zool.-bot. Gesellsch. Wien*, 1879, p. 106.
Cynchramus pyrrhuloides. *Boyd. B. Cauc.* p. 72 (1879).
Emberiza schœniclus, var. pyrrhuloides, *Seebohm, Hist. Brit. B.* ii. p. 135 (1884).

Adult male. General colour above sandy rufous, shaded with ashy, the feathers of the mantle with black centres slightly tinged with chestnut; lower back, rump, and upper tail-coverts ashy grey, paler and more pearly grey on the latter; lesser wing-coverts pale chestnut; median coverts the same, with black bases; greater coverts black, externally pale chestnut, creamy buff on the edges; bastard-wing and primary-coverts dusky, edged with isabelline, a little more chestnut on the former; quills dusky blackish, externally sandy buff, inclining to whitish or isabelline on the ends of the outer webs; centre tail-feathers pale sandy, browner in the centre and blackish along the shaft; crown of head black, separated from the back by a broad white collar, posteriorly ashy grey; feathers round eye and ear-coverts black like the crown; cheeks white like the sides of the neck; throat black; remainder of under surface from the fore neck downwards pure white, with a faint ashy tinge on the sides of the upper breast; thighs, under tail-coverts, under wing-coverts, and axillaries white; quills below dusky, white along their inner edge. Total length 6·5 inches, culmen 0·45, wing 3·4, tail 3·1, tarsus 0·8.

Adult female. Differs from the male in the same way as in *P. palustris*. Total length 6·3 inches, culmen 0·45, wing 3·1, tail 2·65, tarsus 0·75.

Hab. From Astrachan to Turkestan and Yarkand.

a. ♀ ad. sk.	Astrachan.	Hume Coll.
b, c. ♂ ♀ ad. sk.	Syr-Darya, Nov.	Dr. Severtzoff [C.].
d, e. ♂ ♀ ad. sk.	Fort Perowsk, Syr-Darya, Jan.	Dr. Severtzoff [C.].
f. ♂ ad. sk.	Saisan, June 2 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.

3. Pyrrhulorhyncha pyrrhulina.

Schœniclus pyrrhulinus, *Swinh. Ibis*, 1876, p. 333, pl. viii. fig. 2.
Schœnicola pyrrhulina, *Blakist. & Pryer, Ibis*, 1878, p. 243; *Seeb. Ibis*, 1879, p. 40.
Emberiza schœniclus, subsp. palustris (*nec Savi*), *Seebohm, Ibis*, 1879, p. 40.

Emberiza schœniclus palustris (*nec Savi*), *Blakist. & Pryer, B. Japan*, p. 171 (1882); *Blakist. Amended List B. Japan*, p. 17 (1884).

Adult male (type of species). Similar to *P. palustris* of Europe, and of the same dark type of coloration, but smaller, and with the flanks white, without any streaks whatever. Total length 5·7 inches, culmen 0·45, wing 3·1, tail 2·35, tarsus 0·75. (*Mus. H. Seebohm.*)

Adult female. Differs from the male in wanting the black head and throat, the crown being reddish brown streaked with black, with a faint streak of creamy buff, and a broad eyebrow of the same colour; under surface of body isabelline, rather more sandy buff on the fore neck, the dusky malar line very distinct. Total length 5·9 inches, culmen 0·5, wing 3·4, tail 2·7, tarsus 0·75. (*Mus. H. Seebohm.*)

Hab. Yezo, and Japan generally (*Blakiston*).

53. EMBERIZA.

	Type.
Emberiza, *Briss. Orn.* iii. p. 257 (1760)	E. citrinella.
Cynchramus, *Boie, Isis*, 1826, p. 974	E. schœniclus.
Citrinella, *Kaup, Natürl. Syst.* p. 142	E. citrinella.
Orospina, *Kaup, t. c.* p. 154	E. rustica.
Cia, *Kaup, t. c.* p. 138	E. cia.
Spina, *Kaup, t. c.* p. 153	E. fucata.
Cirlus, *Kaup, t. c.* p. 153	E. cirlus.
Ocyris, *Hodgs. in Gray's Zool. Misc.* p. 84 (1844)	E. pusilla.
Schœnicola, *Bp. Consp.* i. p. 463 (1850)	E. schœniclus.
Glycispina, *Cab. Mus. Hein.* Th. i. p. 128 (1850)	E. hortulanus.
Polymitra, *Cab. t. c.* p. 129 (1850)	E. flaviventris.
Hypocentor, *Cab. t. c.* p. 131 (1850)	E. aureola.
Granativora, *Bp. Rev. Zool.* 1857, p. 162	?
Onychospina, *Bp. t. c.* p. 162	E. fucata.
Buscarla, *Bp. t. c.* p. 163	E. pusilla.
Hylæspiza, *Blas. List B. Eur.* (1862, *teste Newton*)	E. cia.

Head of *Emberiza citrinella.*

Range. Palæarctic, Indian, and Ethiopian Regions, but absent in the Indo-Malayan and Australian Regions.

Key to the Species.

a. Sides of body distinctly streaked with blackish or brown.
  a'. With some yellow on the under surface.
    a''. Rump reddish, contrasting with the back.
      a'''. No stripes on the throat and breast.

a^4. Crown yellow, laterally greenish; eyebrow and throat yellow; chestnut or bay on the breast ..... *citrinella* ♂ ad., [p. 516.

b^4. Crown chestnut or ashy brown, blackish along the sides; eyebrow, throat, and breast buff, the latter washed with yellow ..... *aureola* ♀ ad., p. 511.

b''. Throat and breast striped.

c^4. Larger: wing 3·2 inches; with concealed yellow on the crown ..... *citrinella* ♀ ad., [p. 518.

d^4. Smaller: wing 2·65 inches; with no yellow, but a tinge of chestnut on the crown ..... *rutila* ♀ ad. & ♂ juv., [p. 514.

b'''. With no reddish colour on the rump, which is brown or greenish or ashy.

c'''. No spots or stripes on the throat and breast.

e^4. Head yellowish or olive-green or ashy olive.

a^5. Back reddish brown with black streaks.

a^6. Throat black, followed by a yellow patch; eyebrow yellow. *cirlus* ♂, p. 526.

b^6. Throat dull ashy grey, lores and base of chin blackish; cheeks uniform with throat ..... *spodocephala* ♂, [p. 523.

c^6. Throat yellow, as well as the cheeks.

a^7. Lores and base of chin black, as well as a malar stripe .... *personata* ♂, p. 521.

b^7. Lores pale yellow; cheeks yellow like throat, with no malar stripe ..... *sulphurata* ♀ ad., [p. 520.

b^5. Back yellowish green, narrowly streaked with black; throat yellow; base of chin blackish..... *sulphurata* ♂ ad., [p. 520.

f^4. Crown black like the ear-coverts; a yellow eyebrow; fore neck black; throat yellow ..... *elegans* ♂ ad., p. 497.

g^4. Crown reddish brown, streaked with black; ear-coverts chestnut-brown; a yellowish eyebrow ..... *elegans* ♀ ad., p. 499.

d'''. Throat and breast striped or spotted.

h^4. Lesser wing-coverts greenish grey, contrasting with the back ..... *cirlus* ♀, p. 527.

i^4. Lesser wing-coverts reddish brown, resembling the back

c^5. Larger: wing 2·8 inches; streaks on flanks very broad ..... *personata* ♀ ad., [p. 522.

d^5. Smaller: wing 2·6 inches; streaks on flanks narrow ..... *spodocephala* ♀ ad., [p. 524.

b'. With no tinge of yellow on the under surface.

c''. Streaks on breast distinct.

e'''. Ear-coverts chestnut.

k^4. Throat vinous chestnut like the ear-coverts ..... *pusilla* ♂ ♀ ad., p. 488.

l^4. Throat white or buffy white.
e^5. Centre of crown chestnut; lesser wing-coverts brown with dusky centres; no chestnut on breast or flanks. ..... *pusilla* ♂ imm., p. 488.
f^5. Centre of crown brown, streaked with black; lesser wing-coverts chestnut.
d^6. Breast and sides of body chestnut, the latter streaked with black.. *fucata* ♂ ♀ ad., p. 493.
e^6. Breast and sides of body whitish, streaked with blackish ..... *schœniclus* ♀, p. 482.
f''. Ear-coverts brown, not chestnut.
m^4. Lower parts rufous; chest more ashy, with dusky spots and streaks.. *stracheyi* imm., p. 540.
n^4. Abdomen whitish or pure white.
g^5. No yellow eyebrow.
f^6. Larger: wing 3·45 inches; with concealed white on the head .. *leucocephala* ♀ ad., [p. 550.
g^6. Smaller: wing not exceeding 3 inches; no white on the head.
c^7. Streaks on breast and flanks chestnut ..... *rustica*, p. 490.
d^7. Streaks on breast and flanks dusky brown..... *stewarti* ♀, p. 547.
h^5. A broad yellow eyebrow ..... *chrysophrys*, p. 499.
d''. No streaks on breast; ear-coverts black like the throat and sides of crown.
g'''. A mesial streak of white down the crown and a broad white eyebrow.... *tristrami* ♂ ♀ ad., [p. 546.
h'''. Crown entirely uniform, as well as the sides of the face; no white eyebrow.
o^4. Lesser wing-coverts chestnut ..... *schœniclus* ♂ ad., [p. 481.
p^4. Lesser wing-coverts slaty grey.
i^5. A white collar round the hind neck; rump and upper tail-coverts ashy grey; scapulars black, externally white; no chestnut on the quills *passerina* ♂ ad., [p. 485.
k^5. A sandy rufous collar round the hind neck; rump and upper tail-coverts sandy rufous; scapulars also of this colour; quills externally sandy rufous or chestnut *yessoensis* ♂ ad., [p. 486.
b. Sides of body uniform or only streaked with hair-like shaft-lines.
c'. With the bill entirely red; under surface cinnamon.
e''. Throat olive-yellow, the chest more ashy. [p. 531.
i'''. No streaks on the chest ..... *hortulana* ♂ ad.,
k'''. Chest streaked with dusky..... *hortulana* ♀ ad.,
f''. Throat cinnamon-rufous, shaded in winter with ashy tips to the feathers. [p. 531.
l'''. No band across the chest. [p. 533.
q^4. No streaks on the chest ..... *buchanani* ♂ ad.,
r^4. Chest streaked with dusky ..... *buchanani* ♀ ad.,
m'''. A broad band of bluish grey across the chest ..... [p. 534.
cæsia ♂ ad., p. 536.

d'. With the upper mandible blackish or dark brown, never entirely red.
g''. With yellow on the underparts.
n'''. No collar across the throat.
*s*⁴. No black on the head.
*l*⁵. No chestnut on the throat.
*h*⁶. Under tail-coverts yellow.
*e*⁷. Abdomen isabelline with a slight tinge of yellow.
*a*⁸. Larger: wing 3·55 inches; rump with concealed chestnut ..... *melanocephala* ♀ ad., [p. 504.
*b*⁸. Smaller: wing 3·15 inches; rump with concealed yellow. *luteola* ♀ ad., p. 507.
*f*⁷. Abdomen yellow like the breast; rump chestnut .... *rutila* ♀, p. 514.
*i*⁷. Under tail-coverts white; breast entirely ashy; throat yellow .. *cinerea*, p. 529.
*m*⁵. Throat chestnut.
*k*⁶. Rump uniform chestnut like the head and rest of the upper surface ..... *rutila* ♂ ad., p. 514.
*l*⁶. Rump yellow; head orange-yellow ..... *luteola* ♂ ad., p. 506.
*t*⁴. Head black or blackish brown.
*n*⁵. No white eyebrow; no white streak on crown; rump orange-chestnut. *melanocephala* ♂, [p. 504.
*o*⁵. A white eyebrow and a white streak down the crown; rump ashy grey.
*m*⁶. Scapulars uniform chestnut; back chestnut, or chestnut with black centres to the feathers
*g*⁷. With a white wing-band .... *flaviventris*, p. 499.
*h*⁷. With no white wing-band .. *forbesi*, p. 502.
*n*⁶. Scapulars blackish like the back, with paler brown edges.
*i*⁷. Throat white ..... *cabanisi*, p. 503.
*k*⁷. Throat yellow; base of chin only white ..... *major*, p. 502. / *orientalis*, p. 502.
o'''. With a chestnut collar across the lower throat.
*u*⁴. Chin and upper throat black ..... *aureola* ♂ ad., p. 510.
*v*⁴. No black on chin ..... *aureola* ♂ imm., [p. 512.
h''. With no yellow, but sometimes sandy buff, on the underparts.
*w*⁴. Lower back and rump chestnut.
*p*⁵. Crown white, with more or less indications of black streaks; throat chestnut ..... *leucocephala*, p. 549.
*q*⁵. Crown uniform ashy grey; throat black ..... *stewarti*, p. 547.
*r*⁵. Crown of head bluish grey, with lateral darker stripes on the sides of the crown; throat bluish grey.

o^6. Sides of crown blackish; eyebrow white or greyish white.
l^7. Median and greater wing-coverts tipped with white, forming wing-bars ..... *cia* ♂ ad., p. 537.
m^7. Median and greater wing-coverts tipped with rufous, not forming distinct wing-bars ..... *stracheyi*, p. 539.
p^6. Sides of crown chestnut or dark brown.
n^7. Eyebrow whitish; scapulars rufous, streaked with black.. *stracheyi* ♀ ad., [p. 540.
o^7. Eyebrow blue-grey like the sides of face and throat; scapulars uniform chestnut.. *godlewskii*, p. 542.
s^5. Crown of head dark brown in the centre, with lateral bands of chestnut
q^6. Lores black.
p^7. Ear-coverts chestnut..... *cioides* ♀ ad., p. 543.
q^7. Ear-coverts blackish..... *ciopsis* ♂ juv., p. 544.
r^6. Lores whitish.
r^7. Throat whitish ..... *ciopsis* ♀ ad., p. 545.
s^7. Throat tinged with bluish grey *castaneiceps* ♀ ad., [p. 544.
t^5. Crown of head uniform chestnut.
s^6. Ear-coverts black ..... *ciopsis* ♂ ad., p. 544.
t^6. Ear-coverts chestnut.
t^7. Larger: wing 3·3 inches .... *cioides* ♂ ad., p. 542.
u^7. Smaller: wing 2·9 inches .. *castaneiceps* ♂ ad., [p. 544.
u^5. Crown of head ashy grey, streaked with black all over; a circle of black on the fore neck..... *fucata* ♂, p. 493.
v^5. Crown of head rufous, streaked with black; lower back, rump, and upper tail-coverts rufous; throat and breast uniform sandy buff; abdomen white ..... *yessoensis* ♀, p. 487.
x^4. Lower back and rump like the back, ashy brown, streaked with dusky .. *cinerea* ♀, p. 529.

1. Emberiza schœniclus.

L'Ortolan de roseaux, *Briss. Orn.* iii. p. 274 (1760); *Montb. Hist. Nat. Ois.* iv. p. 315 (1778); *Daubent. Pl. Enl.* v. pl. 247. fig. 2, pl. 497. fig. 2.

Emberiza schœniclus, *Linn. Syst. Nat.* i. p. 311 (1766); *Temm. Man. d'Orn.* i. p. 307 (1815); *Koch, Syst. baier. Zool.* p. 212 (1816); *Naum. Vög. Deutschl.* iv. pl. 105 (1824); *Roux, Orn. Prov.* pls. 113, 114 (1825); *Werner, Atlas, Granivores*, pl. 974 (1827); *Gould, B. Eur.* iii. pl. 183 (1837); *Macgill. Brit. B.* i. p. 453 (1837); *Bp. Comp. List B. Eur. and N. Amer.* p. 36 (1838); *Crespon, Orn. Gard*, p. 217 (1840); *Keys. u. Blas. Wirb. Eur.* p. 156 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 176 (1840); *Selys-Longch. Faun. Belge*, p. 80 (1842); *Yarr. Brit. B.* i. p. 438 (1843); *Gray, Gen. B.* ii. p. 377 (1844); *Thomps. B. Irel.* i. p. 245 (1849);

Midd. Sibir. Reis., Zool. p. 145 (1851); *Kjærb. Danm. Fugle*, pl. 25. fig. 4 (1852); *Schl. Vog. Nederl.* pl. 158 (1854); *Hewits. Eggs Brit. B.* i. p. 187, pl. 47. fig. 1 (1856); *Sundev. Svensk. Fogl.* pl. 6. figs. 5, 6, 7 (1858); *Schrenk, Reis. Amurl.* p. 283 (1859); *Powys, Ibis*, 1860, p. 138; *Linderm. Vög. Griechenl.* p. 56 (1860); *Schl. Dier. Nederl.* pl. 15. figs. 7, 8 (1861); *F. & P. Godman, Ibis*, 1861, p. 83; *Gray, List Brit. B.* p. 102 (1863); *Radde, Reis. Sibir., Vög.* p. 172 (1863); *Wright, Ibis*, 1864, p. 55; *More, Ibis*, 1865, p. 125; *Giglioli, t. c.* p. 58; *Smith, Ibis*, 1868, p. 444; *Hume, Ibis*, 1869, p. 355; *Borggr. Vogelf. Norddeutschl.* p. 73 (1869); *Droste, Vogelw. Bork.* p. 109 (1869); *Fritsch, Vög. Eur.* p. 231, tab. 20. figs. 2, 5, 12 (c. 1870); *Salvad. Faun. Ital., Ucc.* p. 143 (1871); *Gray, B. West. Scotl.* p. 129 (1871); *Harting, Handb. Brit. B.* p. 36 (1872); *Keulem. Onze Vogels*, ii. pl. 38 (1872); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Alston & Harvie Brown, Ibis*, 1873, p. 63; *Brooke, t. c.* p. 246; *Wright, Ibis*, 1874, p. 233; *Durnf. t. c.* p. 396; *Dresser, Ibis*, 1875, p. 248; *Danf. & Harvie Brown, t. c.* p. 312; *Fallon, Ois. Belg.* p. 87 (1875); *Irby, B. Gibr.* p. 117 (1875); *Newton, ed. Yarr. Brit. B.* ii. p. 23 (1876); *Wharton, Ibis*, 1876, p. 25; *Seebohm & Harvie Brown, t. c.* p. 117; *Dresser, B. Eur.* iv. p. 241, pls. 221, 222. fig. 1 (1878); *Seebohm, Ibis*, 1878, p. 339; *Hume, Str. F.* 1879, p. 107; *Finsch, Verh. z.-b. Gesellsch. Wien*, xxix. p. 217 (1879); *Giglioli, Iconogr. Avif. Ital.* pl. 197 (1880); *Danf. Ibis*, 1880, p. 84; *Biddulph, Ibis*, 1881, p. 81; *Scully, t. c.* p. 375; *Tacz. Bull. Soc. Zool. France*, vii. p. 392 (1882); *Seebohm, Ibis*, 1882, pp. 218, 379; *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90; *B. O. U. List Brit. B.* p. 62 (1883); *Seebohm, Ibis*, 1883, p. 11; *Clarke, Ibis*, 1884, p. 143; *Saunders, t. c.* p. 377; *Seebohm, Hist. Brit. B.* ii. p. 135, pl. 15 (1884); *Whitehead, Ibis*, 1885, p. 40; *Stejneger, Bull. U.S. Nat. Mus.* no. 22, p. 322 (1885); *Giglioli, Avif. Ital.* p. 53 (1885); *Salvad. Elench. Ucc. Ital.* p. 166 (1887).

Emberiza arundinacea, *S. G. Gm. Reis. Russl.* ii. p. 175 (1774).

Reed Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 173 (1783).

Cynchramus schœniclus, *Boie, Isis*, 1826, p. 974; *Cab. Mus. Hein.* Th. i. p. 130 (1850); *Degl. & Gerbe, Orn. Eur.* i. p. 323 (1867); *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 309 (1877); *Bogd. B. Cauc.* p. 72 (1879); *Radde, Orn. Cauc.* p. 197 (1884).

Cynchramus stagnatilis, *Brehm, Vög. Deutschl.* p. 301 (1831).

Cynchramus septentrionalis, *Brehm, Vög. Deutschl.* p. 302 (1831).

Schœnicola arundinacea, *Bp. Rev. Crit.* p. 164 (1850); *id. Consp.* i. p. 463 (1850); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 167 (1859); *Gould, B. Gt. Br.* iii. pl. 29 (c. 1863); *Loche, Expl. Sci. Algér., Ois.* i. p. 176 (1867); *Tacz. Bull. Soc. Zool. France*, i. p. 177 (1876), vii. p. 392 (1882).

Cynchramus riparius, etc., *Brehm, Vogelf.* pp. 115, 116 (1885).

Schœnicola schœniclus, *Doderl. Avif. Sicil.* p. 89 (1869).

Citrinella schœnicla, *Gray, Hand-l. B.* ii. p. 114, no. 7708 (1870).

Emberiza schœnicola, *Hume, Ibis*, 1871, p. 38; *C. Swinh. Ibis*, 1882, p. 84.

Adult male in breeding-plumage. General colour above rufous, with pale edges to the feathers and broad black centres to those of the mantle and back; lower back and rump ashy grey, with longitudinal black centres; upper tail-coverts also ashy grey, but with

browner shaft-stripes; scapulars chestnut, broadly centred with black; lesser wing-coverts uniform chestnut; median wing-coverts chestnut with black bases; greater coverts black, edged with chestnut, and with sandy-buff outer margins; bastard-wing dusky brown, edged with ashy or pale rufous; primary-coverts dusky brown, narrowly fringed with ashy rufous; quills blackish, externally edged with rufous, more ashy along the outer margin of the primaries, which are whitish towards the tips; tail-feathers dark brown, with whity-brown margins, the remainder blackish edged with brown, the two outer feathers edged with white, excepting for a dusky mark along the end of the outer web, and having a long wedge-shaped mark of white near the end of the inner web; crown of head, sides of face, and ear-coverts entirely black, separated from the back by a broad band of white, forming a collar which joins the white sides of the neck; cheeks white, joined to the sides of the neck; throat black, descending on to the centre of the fore neck; remainder of under surface of body white, streaked with black on the sides of the body; the stripes on the flanks broader and somewhat tinged with rufous; the sides of the breast ashy grey and more narrowly streaked with black; thighs brown; under tail-coverts white, as also the axillaries and under wing-coverts; quills dusky below, ashy along the inner web. Total length 6 inches, culmen 0·45, wing 3, tail 2·6, tarsus 0·75.

In the breeding-season the upper plumage becomes so worn that the back is almost entirely black, owing to the abrasion of the rufous edgings.

Adult male in winter plumage. Not so black as in summer, the whole of the upper surface having rufous edgings to the feathers, especially on the wings; the black of the head and face hidden by rufous edges to the feathers, and the white hind neck entirely obscured by sandy-brown margins; the white of the cheeks and under surface of body washed with brown, and the black throat obscured by sandy-buff margins.

As spring approaches all the rufous and sandy-buff margins become worn off, so that the underlying plumage is developed.

Adult female in breeding-plumage. Wants the black head and black throat of the male, the head being like the back, reddish brown streaked with black; a streak of sandy buff above the eye; ear-coverts reddish brown; cheeks white, joined to a spot on the sides of the neck; hind neck ashy, streaked with dusky blackish, but not forming so distinct a band as the white collar in the male; throat ashy fulvous, with a broad black band on each side, widening out on the sides of the neck; fore neck rufous, broadly streaked with black; rest of under surface of body white, streaked with dusky brown on the sides; thighs brown. Total length 5·2 inches, culmen 0·45, wing 2·9, tail 2·4, tarsus 0·7.

Some old females show a great deal of black on the throat and fore neck, and approach the males in plumage on the under surface; but the head is never so black, and the ear-coverts are black washed

with rufous, with which the black of the lower throat is also strongly mixed.

Young male in first plumage. Recalls the general idea of the plumage of the old female, but is much more yellowish above, the feathers being black edged with sandy yellowish, rufescent on the head; a broad eyebrow of sandy yellowish; round the neck a collar of ashy whitish, slightly mottled with dusky streaks; chestnut edges to the wing-feathers very broad; ear-coverts black, obscured by rufous edges to the feathers; cheeks white, widening out towards the sides of the neck; under surface of body dull white, sandy yellowish on the lower throat, fore neck, breast, and flanks, all of which are thickly streaked with dusky blackish; on each side of the throat a broad black streak, widening out below.

After their first moult the young birds still keep up their streaked appearance below, and they are browner than the old birds in winter. The young males may be distinguished by the concealed black of the head and ear-coverts, the latter generally showing a black spot. The young females are very similar to the old females in winter plumage, but are rather more rufous, having a band of rufous along the side of the crown, with rufous ear-coverts.

Hab. The whole of Europe, extending to the valley of the Yenesai and as far eastwards as Kamtschatka, according to Dr. Taczanowski. Prjevalski states that he met with the species on Lake Darei-nor and the Hoangho Valley. It reaches into North-western India in winter.

a, b. ♂ ♀ ad. st.	Crieff, Perthshire, June 1886.	W. R. Ogilvie Grant, Esq. [P.].
c. ♂ ad. st.	Cambridgeshire.	Mr. J. Baker [C.].
d, e. ♂ ♀ ad. st.	Norfolk, June.	Lord Walsingham [P.].
f. ♂ ad. sk.	Romney Marsh, Kent, July 25.	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Near London, June.	Gould Coll.
h. ♀ ad. sk.	Near London, Feb.	Gould Coll.
i. ♀ ad. sk.	Cookham, Berks, June 18, 1867 (*R. B. S.*).	Hume Coll.
k, l. ♂ ad. sk.	Maidenhead, Berks, April 4.	Gould Coll.
m. ♂ ad. sk.	Maidenhead, Berks, May 12.	Gould Coll.
n. ♂ ad. sk.	Oxford, Feb. 4.	R. B. Sharpe, Esq. [P.].
o. ♂ ad. sk.	Wiltshire.	Montagu Coll.
p. ♂ imm. sk.	Axmouth, Devon, Oct. 28 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
q. ♀ ad. sk.	Avington, Hants, May.	R. B. Sharpe, Esq. [P.].
r, s. ♂ ad. sk.	Southampton, Jan.	Colonel Irby [P.].
t. ♂ ad. st.	Lancing, Sussex, April 1, 1884.	R. B. Sharpe, Esq. [P.].
u. ♂ ad. sk.	Lancing, March 13.	R. B. Sharpe, Esq. [P.].
v. ♀ ad. sk.	Lancing, April 8.	R. B. Sharpe, Esq. [P.].

w. ♀ ad. sk.	Brighton, Sussex, Oct.	R. B. Sharpe, Esq. [P.].
x, *y*, *z*. ♂ juv. sk.	Brighton, Sussex, Nov.	R. B. Sharpe, Esq. [P.].
a'. ♀ ad. sk.	Brighton, Sussex, Nov.	R. B. Sharpe, Esq. [P.].
b'. ♀ juv. sk.	Brighton, Sussex, Nov.	R. B. Sharpe, Esq. [P.].
c'. ♂ juv. sk.	Jemtland, Sweden, July 25 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
d'. ♂ ad. sk.	Skåne, Sweden, May 28 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
e'. ♂ ad. sk.	Skåne, Sweden, April 3 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
f'. ♀ ad. sk.	Bodö, Norway.	Salvin-Godman Coll.
g'. ♂ juv. sk.	Norway, Sept. 18 (*R. Collett*).	Christiania Museum.
h'. ♂ juv. sk.	Norway, July 17 (*R. Collett*).	Christiania Museum.
i'. ♀ ad. sk.	Christiania, May 21 (*R. Collett*).	Christiania Museum [P.].
k'. ♀ juv. sk.	Heligoland, Oct. 2.	R. B. Sharpe, Esq. [P.].
l'. ♀ ad. sk.	Archangel.	R. B. Sharpe, Esq. [P.].
m'. ♂ ad. sk.	Petchora River (*Seebohm & Harvie Brown*).	Col. Feilden & J. A. Harvie Brown, Esq. [P.].
n'. ♂ ad. sk.	Havre, France, June 23 (*V. Pluche*).	Edward Hargitt, Esq. [P.].
o'. ♂ ad. sk.	South France.	Gould Coll.
p'. ♂ ad. sk.	France (*Fairmaire*).	Hume Coll.
q'. ♂ ad. sk.	Near Gibraltar, Feb. 26, 1871 (*L. H. Irby*).	Hume Coll.
r'. ♀ juv. sk.	Silla, Valencia, Spain, Nov. 25.	Howard Saunders, Esq. [P.].
s', *t'*. Ad. & juv. sk.	Near Pisa, Italy (*Prof. Savi*).	Prof. H. H. Giglioli, [P.].
u'. ♂ ad. sk.	Near Constantinople, Feb. 24 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
v'. ♀ juv. sk.	Constantinople, Turkey (*T. Robson*).	Salvin-Godman Coll.
w'. ♂ ad. sk.	Smyrna, Asia Minor, Nov. 10 (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
x'. ♂ ad. sk.	Djebil Taurus, Asia Minor, Sept. 28.	R. B. Sharpe, Esq. [P.].
y'. ♂ ad. sk.	Adalia, Asia Minor, Dec. 23 (*C. G. Danford*).	H. Seebohm, Esq. [P.].
z', *a*. ♂ ♀ ad. sk.	Ismid, Asia Minor, Nov. 16 (*C. G. Danford*).	H. Seebohm, Esq. [P.].
β. ♂ ad. sk.	Narimskaja, Ob River, Sept. 16 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
γ. ♀ juv. sk.	Bolschoi Ustram, Ob River, Sept. 11 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
δ. ♂ ad. sk.	Valley of the Yen-e-say, June 18.	H. Seebohm, Esq. [P.].
ε, *ζ*. ♂ ♀ ad. sk.	Perowsk, Syr-Darya, Jan.	Dr. Severtzoff [C.].
η, *θ*. ♂ ♀ ad. sk.	Yarkand (*J. Biddulph*).	Hume Coll.
ι. ♂ ad. sk.	Yarkand, Nov. 12 (*J. Biddulph*).	Hume Coll.

κ. ♀ ad. sk.	Kashgar, Feb. 28 (*J. Biddulph*).	Hume Coll.
λ. ♀ ad. sk.	Candahar, Afghanistan, Feb. 8.	Col. C. Swinhoe [P.].
μ, ν. ♂ ♀ ad. sk.	Gilgit, Feb. 1878 (*J. Biddulph*).	Hume Coll.
ξ, ο. ♂ ♀ ad. sk.	Rohtuk, Punjab, Dec. 29, 1867 (*A. O. H.*).	Hume Coll.

2. Emberiza passerina.

Emberiza passerina, *Pall. Reis. Russ. Reichs*, i. App. p. 456 (1771); *id. Zoogr. Rosso-Asiat.* ii. p. 49 (1811); *Seebohm, Ibis*, 1879, p. 39, pl. i. fig. 1.

Emberiza schœniclus, var. *β*, *Pall. Zoogr. Rosso-Asiat.* i. p. 48 (1811).

Cynchramus pallasii, *Cab. Mus. Hein.* Th. i. p. 130, note (1850); *Olph-Galliard, Rev. et Mag. de Zool.* 1869, p. 181.

Emberiza polaris, *Midd. Sibir. Reis.* ii. p. 146 (1851); *Seebohm, Ibis*, 1878, p. 339.

Emberiza schœniclus, var. minor, *Midd. Sibir. Reis.* ii. p. 144 (1851); *Schrenck, Reis. Amurl.* p. 284 (1859); *Severtz. Turkest. Jevotn.* pp. 64, 118.

Emberiza canescens, *Swinh. Ibis*, 1860, p. 62, 1861, p. 334; *id. P. Z. S.* 1863, p. 301.

Emberiza alleonis, *Vian, Rev. et Mag. de Zool.* 1869, p. 97.

Citrinella canescens, *Gray, Hand-l. B.* ii. p. 113, no. 7693 (1870).

Schœnicola pallasii, *Swinh. P. Z. S.* 1871, p. 389; *David & Oust. Ois. Chine*, p. 321 (1878).

Emberiza pallasii, *Dresser, Ibis*, 1875, p. 249.

Schœnicola passerina, *Tacz. Bull. Soc. Zool. France*, i. p. 178 (1876), iv. p. 137 (1879).

Schœniclus pallasii, *Swinh. Ibis*, 1876, p. 333.

Cynchramus polaris, *Prjev. in Rowley's Orn. Misc.* ii. p. 309 (1877).

Emberiza minor, *Seebohm, Ibis*, 1879, p. 39.

Emberiza schœniclus, var. passerinus, *Seebohm, Hist. Brit. B.* ii. p. 135 (1884).

Adult male in summer plumage. Similar to *E. schœniclus*, but much smaller and with the colours much purer, black and white without the rufous, the rump and upper tail-coverts white, the latter with ashy centres; wings black, with more or less distinct white edges; lesser coverts ashy grey; facial markings and under surface as in *E. schœniclus*, but the white much purer and the contrast much stronger: "bill blackish brown, the edges of the lower mandible reddish; legs flesh-colour; toes brownish; iris brown" (*David*). Total length 5·3 inches, culmen 0·4, wing 2·9, tail 2·45, tarsus 0·7. (*Mus. H. Seebohm.*)

Adult male in winter plumage. Sandy rufous, entirely obscuring the back of the head and face; the white of the hind neck quite hidden and only observable on disarranging the plumage; the back with more or less evidences of black centres to the feathers; the white of the rump entirely obscured with sandy rufous; lesser wing-coverts conspicuously bluish grey; the rest of the coverts and the quills broadly edged with sandy rufous, with a certain amount of white subterminally visible on the former; the whole of the under surface washed with sandy rufous, which entirely obscures the black throat.

Mr. Seebohm's collection contains two specimens marked as females—one from Amoy (*Swinhoe*) without date, and the other from Amoor-Land (*Middendorff*), also without date. The latter bird has nearly as black a head as the adult male; and it would appear from this that the adult female is not very different from the latter when she is in full plumage; but doubtless the hen bird never gets so pure black and white as the male, but retains more or less of the sandy-rufous edgings on the back and wing-coverts.

Hab. Siberia, eastwards from the valley of the Yenesai to Turkestan, and extending into North China and Mongolia.

a. ♂ ad. sk. East Siberia, April 3. Dr. Lenz.

3. Emberiza yessoensis.

Emberiza, sp., *Blakist, Ibis*, 1862, p. 328.
Emberiza minor, *Blakist. Ibis*, 1863, p. 99.
Schœnicola yessoensis, *Swinh. Ibis*, 1874, p. 161 (*ex Blakist. MSS.*); *Blakist. & Pryer, Ibis*, 1878, p. 243.
Emberiza yessoensis, *Seebohm, Ibis*, 1879, p. 39, pl. i. fig. 2; *Blakist. & Pryer, B. Japan*, p. 171 (1882); *Blakist. Amended List B. Japan*, pp. 17, 61 (1884).

Adult male. General colour above sandy rufous, uniform on the hind neck, upper mantle, lower back, rump, and upper tail-coverts; the mantle-feathers black, with chestnut margins and laterally edged with creamy buff; lesser wing-coverts slaty grey; median coverts chestnut, with black bases; greater coverts blackish, externally rufous, paler towards the ends; bastard-wing, primary-coverts, and quills blackish, edged with rufous, paler on the margin of the primaries, the innermost secondaries with a black patch near the base of the outer web; centre tail-feathers ashy brown, pale rufous externally, the remainder black, with a wedge-shaped mark of white on the third feather, more extended on the penultimate, the outer feather white, excepting an oblique basal mark on the inner web and a narrow dusky mark along the end of the outer web; crown of head and sides of face entirely black as well as the throat, with a little whitish on the eyebrow and chin (probably the remains of winter plumage); remainder of under surface creamy white, purer white behind the ear-coverts; sides of neck sandy rufous; abdomen purer white; sides of body and flanks with a few reddish shaft-streaks; thighs sandy brown; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy along the inner edge: "bill dark horn-colour; feet reddish brown; iris brown" (*Blakiston*). Total length 5·5 inches, culmen 0·5, wing 2·65, tail 2·55, tarsus 0·75. (*Mus. H. Seebohm.*)

Adult male in winter plumage. More sandy buff than in summer, especially on the underparts; the head rufous-brown, with black bases to the feathers, and a mesial streak as well as a broad eyebrow of sandy buff; the black ear-coverts obscured with rufous and the black throat with sandy buff. (*Mus. H. Seebohm.*)

The *adult female* resembles the male in winter plumage, and only differs in having the throat sandy buff like the breast, with a broad malar line of black. Total length 5·5 inches, culmen 0·45, wing 2·6, tail 2·3, tarsus 0·75.

Hab. Japan generally.

a. Ad. sk. Yokohama. H. Pryer, Esq. [C.].

4. Emberiza pusilla.

Emberiza pusilla, *Pall. Reis. Russ. Reichs,* iii. p. 697 (1776); *id Zoogr. Rosso-Asiat.* ii. p. 42 (1811); *Gray, Gen. B.* ii. p. 377 (1844); *Blyth, J. A. S. Beng.* xv. p. 40 (1846); *Bp. Consp.* i. p. 464 (1850); *Middend. Reis. Sibir., Zool.* p. 148, pl. xiii. fig. 4 (1851); *Schl. Vog. Nederl.* pl. 157 (1854); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 163, cum tab. (1859); *Schrenck, Reis. Amurl.* p. 289 (1859); *Blasius in Naum. Vög. Deutschl.* Anhang, xiii. p. 382, figs. 3, 4 (1860); *Swinh. Ibis,* 1860, p. 61, 1861, p. 334; *Schl. Dier. Nederl. Vog.* pl. 15. fig. 9 (1861); *Blasius, Ibis,* 1863, p. 62; *Jerd. B. Ind.* ii. p. 376 (1863); *Radde, Reis. Sibir., Vög.* p. 171 (1863); *Loche, Expl. Sci. Algér., Ois.* i. p. 174 (1867); *Blyth, Ibis,* 1867, p. 42; *Gould, B. Asia,* v. pl. 7 (1867); *Dybowski, J. f. O.* 1868, p. 335; *Gould, Ibis,* 1869, p. 128; *Elwes & Buckley, Ibis,* 1870, p. 194; *Fritsch, Vög. Eur.* tab. 20. figs. 3, 8 (c. 1870); *Gould, B. Gr. Br.* iii. pl. 25 (c. 1870); *Swinh. P. Z. S.* 1871, p. 389; *Salvad. Faun. Ital., Ucc.* p. 142; *Harting, Handb. Brit. B.* p. 111 (1872); *Sundev. Svensk. Fogl.* pl. lxv. fig. 5 (c. 1872); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Hume, Str. F.* 1874, pp. 490, 497; *Alst. & Harvie Brown, Ibis,* 1873, p. 6; *Wald. Ibis,* 1874, p. 143; *Lilford, Ibis,* 1875, p. 6; *Cordeaux, t. c.* p. 182; *Dresser, t. c.* p. 249; *Wardlaw Ramsay, t. c.* p. 351; *Krüper, J. f. O.* 1875, p. 270; *Blyth & Wald. B. Burm.* p. 95 (1875); *Rowley, Orn. Misc.* i. p. 90 (1876); *Newton, ed. Yarr. Brit. B.* ii. p. 4 (1876); *Seebohm & Harvie Brown, Ibis,* 1876, p. 116; *Gätke, J. f. O.* 1876, p. 99; *Cordeaux, Ibis,* 1876, p. 128; *Tacz. Bull. Soc. Zool. France,* i. p. 177 (1876); *Hume, Str. F.* 1876, pp. 279, 291; *Dresser, B. Eur.* iv. p. 235, pl. 220 (1877); *Prjev. in Rowley's Orn. Misc.* ii. p. 308 (1877); *David & Oust. Ois. Chine,* p. 323 (1877); *Finsch, Ibis,* 1877, pp. 57, 62, 64; *Seebohm, t. c.* p. 157; *Wardlaw Ramsay, t. c.* p. 462; *Anderson, Zool. Exped. Yunnan, Aves,* p. 604 (1878); *Tacz. Bull. Soc. Zool. France,* iii. p. 137 (1878); *Hume & Davison, Str. F.* 1878, p. 407; *Seebohm, Ibis,* 1878, p. 337; *Finsch, Verh. z.-b. Gesellsch. Wien,* xxix. p. 216 (1879); *Gätke, Ibis,* 1879, p. 103; *Irby, t. c.* p. 345; *Dubois, Bull. R. Acad. Belg.* (2) xlvii. p. 827 (1879); *Hume, Str. F.* 1879, p. 107; *Brooks, t. c.* p. 488; *Seebohm, Ibis,* 1880, p. 188; *Giglioli, Ibis,* 1881, p. 202; *Seebohm, Ibis,* 1882, p. 379; *Sclater, t. c.* p. 434; *B. O. U. List Brit. B.* p. 61 (1883); *Oates, B. Brit. Burm.* i. p. 353 (1883); *Scebohm, Ibis,* 1884, p. 266; *C. Marshall, t. c.* p. 419; *Seebohm, Hist. Brit. B.* ii. p. 114, pl. 15 (1884); *Tristr. Faun. & Flor. Palest.* p. 72 (1884); *Giglioli, Avif. Ital.* p. 52 (1885); *Salvad. Elench. Ucc. Ital.* p. 166 (1887).

Emberiza durazzii, *Bp. Faun. Ital., Ucc.* pl. xxxvi. fig. 1 (1832–41).

Ocyris oinops, *Hodgs. Icon. ined. in Brit. Mus., Passeres,* pl. 292. figs. 1, 2 (nos. 473, 474); *id. in Gray's Zool. Misc.* p. 84 (1844); *id. P. Z. S.* 1845, p. 35; *Horsf. & Moore, Cat. B. E.I. Co. Mus.*

ii. p. 488 (1856); *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 58 (1863).
Emberiza oinops, *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 108 (1846).
Euspiza pusilla, *Blyth, Cat. B. Mus. As. Soc.* p. 130 (1849).
Buscarla pusilla, *Bp. Rev. et Mag. de Zool.* 1857, p. 163.
Cynchramus pusillus, *Degl. et Gerbe, Orn. Eur.* i. p. 327 (1867).
Citrinella pusilla, *Gray, Hand-l. B.* ii. p. 115, no. 7712 (1869).
Schœnicola pusilla, *Doderl. Avif. Sicil.* p. 89 (1869).
Emberiza lesbia (*nec Gm.*), *Fritsch, Vög. Eur.* tab. 26. fig. 14 (c. 1870).

Adult male in breeding-plumage. General colour above rufous-brown, with broad black centres to the feathers, the rump rather duller brown; the scapulars chestnut, with black centres; lesser wing-coverts brown; median and greater coverts black, externally edged with pale rufous-brown, with narrow white tips; bastard-wing, primary-coverts, and quills blackish, externally fringed with brown, the primaries margined with ashy brown, the secondaries with rufous; tail-feathers blackish brown, edged with lighter brown, the penultimate feather with a long wedge-shaped mark of white on the inner web; the outer feather for the most part white, with an oblique blackish mark on the inner web, and a small dusky mark near the end of the outer web; centre of crown vinous chestnut, with a broad black streak along each side, forming a band; a superciliary line, lores, sides of face, ear-coverts, and throat vinous chestnut, with a moustachial line of black along the under margin of the cheeks, running behind the ear-coverts; hind neck paler than the crown, and streaked with whitish like the sides of the neck; remainder of under surface of body from the lower throat downwards dull white; the centre of the breast, abdomen, and under tail-coverts uniform; the lower throat, fore neck, and breast, as well as the sides of the body, streaked with black; under wing-coverts and axillaries white; quills dusky below, ashy along the inner web: "bill brown, the lower mandible whitish; feet reddish grey; iris brown" (*David*). Total length 4·8 inches, culmen 0·4, wing 2·8, tail 2·05, tarsus 0·8.

Adult female in breeding-plumage. Scarcely differs from the male, but is not quite so richly coloured on the throat, and less distinctly streaked with black below.

In *winter plumage* the adults are more rufous than in summer, with rufescent edges to the feathers of the upper surface, especially on the quills and tail-feathers; the black mark behind the ear-coverts is more distinct and not so broken up as in the breeding-plumage; the under surface is suffused with ochreous buff, and the black streaks are less pronounced.

Young. Resembles more the adult female in winter plumage, but has scarcely any vinous tinge about the face; head rufous-brown, streaked with black, with a slight band of fulvous down the centre of the crown; back fulvescent, washed with rufous and broadly

streaked with black; wing-coverts broadly edged and tipped with yellowish buff; throat whitish, spotted with black like the breast; the latter as well as the flanks yellowish buff, streaked with black. After the first moult the coloration of the adult is assumed, but the plumage is always duller and much paler, and in some birds, probably females, the throat is white without any chestnut.

Nestling. Yellowish buff, broadly streaked with black, the head more rufous, and the ear-coverts rufous; underneath white, washed with rufous on the chin and with ochreous buff on the throat and breast, thickly streaked with black on the latter as well as on the flanks and sides of the body; wings and tail as in adults, with the exception that the wing-coverts are more fulvous at tips.

Hab. From Northern Europe across Siberia to Northern China, wintering to the south in the Himalayas, Assam, Burmah, and Tenasserim.

a. ♂ ad. sk.	Onega, N. Russia, July 12 (*W. Meves*).	Salvin-Godman Coll.
b. ♀ juv. sk.	Onega, N. Russia, July 20 (*W. Meves*).	Salvin-Godman Coll.
c. ♂ juv. autumn. sk.	Langiorskaja, River Ob, Sept. 7 (*Dr. Finsch*).	Geogr. Soc. Bremen.
d. ♂ juv. sk.	Schtschutschja Tundra, Aug. 14 (*Dr. Finsch*).	Geogr. Soc. Bremen.
e. ♂ ad. sk.	Kultuk, Lake Baikal, Sept. 20.	Dr. Lenz.
f, g. ♂ ♀ ad. sk.	Amoorland.	Purchased.
h. ♂ ad. sk.	Peking, Oct. 5, 1868 (*R. Swinhoe*).	Hume Coll.
i, k. Ad. sk.	Nepal.	Hodgson Coll. (Types of *Ocyris oinops.*)
l, m, n. Ad.; *o.* Juv. sk.	Nepal.	Hodgson Coll.
p, q. Ad.; *r, s, t.* Juv. sk.	Nepal (*B. H. Hodgson*).	India Museum.
u. Ad. sk.	Native Sikhim, Oct. 1876 (*L. Mandelli*).	Hume Coll.
v, w. Ad.; *x, y.* Juv. sk.	Sikhim, Nov. 1873 (*L. M.*).	Hume Coll.
z, a'. Ad. sk.	Sikhim, Dec. 1873 (*L. M.*).	Hume Coll.
b'. Ad.; *c', d', e', f'.* Imm. sk.	Sikhim, Jan. 1874 (*L. M.*).	Hume Coll.
g', h'. Ad.; *i', k', l', m'.* Imm. sk.	Sikhim, Feb. 1873–74 (*L. M.*).	Hume Coll.
n'. Ad. sk.	Sikhim, March 1876 (*L. M.*).	Hume Coll.
o', p', q'. Ad. sk.	Sikhim, April 1873–77 (*L. M.*).	Hume Coll.
r'. ♀ ad. sk.	Sikhim, April 1876 (*L. M.*).	Hume Coll.
s', t', u', v', w'. Ad.; *x', y', z', α, β, γ.* Imm. sk.	Sikhim.	Hume Coll.

δ, ε, ζ, η. Ad. sk.	Darjiling.	Hume Coll.
θ, ι, κ. Imm. sk.	Darjiling.	Hume Coll.
λ. ♀ ad. sk.	Dibrughur, Assam, Oct. 24, 1880 (*J. R. Cripps*).	Hume Coll.
μ–σ. ♂ ad.; τ–ψ. ♂ imm. sk.	Shillong, Oct. 1877 (*J. Cockburn*).	Hume Coll.
ω. ♂ ad. sk.	Shillong, Nov. 1877 (*J. Cockburn*).	Hume Coll.
α′, β′, γ′. ♂ ad. sk.	Shillong, Dec. 1877 (*W. Davison*).	Hume Coll.
δ′, ε′. ♂ ad.; ζ′, η′. ♂ imm. sk.	Shillong (*J. Cockburn*).	Hume Coll.
θ′. Ad. sk.	Khasia Hills (*T. C. Jerdon*).	Gould Coll.
ι′. ♀ imm. sk.	Beyond Fenchuganj, Central Sylhet, Jan. 23, 1881 (*A. O. H.*).	Hume Coll.
κ′–π′. ♂ imm.; ρ′. ♀ imm. sk.	Kossum Thall, Manipur, Feb. 12, 1881 (*A. O. H.*).	Hume Coll.
σ′. ♂ imm. sk.	Kowang, Manipur, Feb. 10, 1881 (*A. O. H.*).	Hume Coll.
τ′. ♂ ad. sk.	Limatol, Manipur, Feb. 14, 1881 (*A. O. H.*).	Hume Coll.
υ′, φ′, χ. ♀ ad. sk.	Soognoo, Manipur, Mar. 26, 1881 (*A. O. H.*).	Hume Coll.
ψ′. Ad. sk.	Ponsee, Kachyen Hills, April.	Dr. J. Anderson [C.].
ω′. ♂ imm. sk.	Mooleyit, Tenasserim, Feb. 17, 1877 (*W. Davison*).	Hume Coll.

5. Emberiza rustica.

Emberiza rustica, *Pall. Reis. Russ. Reichs*, iii. p. 698 (1776); *id. Zoogr. Rosso-Asiat.* p. 43, pl. 43 (1811); *Gould, B. Eur.* iii. pl. 177 (1837); *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 466 (1850); *Temm. & Schl. Faun. Japon., Aves*, pl. 58 (1850); *Middend. Sibir. Reis., Zool.* p. 139 (1851); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 161, cum tab. (1859); *Schrenck, Reis. Amurl.* p. 278 (1859); *Blasius in Naum. Vög. Deutschl.* xiii. pl. 382. figs. 1, 2 (1860); *id. Ibis*, 1862, p. 71; *Blakist. t. c.* p. 328; *Swinh. Ibis*, 1863, p. 87; *Radde, Reis. Sibir., Vög.* p. 173 (1863); *Dybowski, J. f. O.* 1868, p. 335; *Borggr. Vogelf. Norddeutschl.* p. 72 (1869); *Gould, Ibis*, 1869, p. 128; *id. B. Asia*, v. pl. 10 (1869); *Sharpe, Ann. & Mag. Nat. Hist.* (4) vi. p. 158 (1870); *Fritsch, Vög. Eur.* tab. 20. fig. 4 (c. 1870); *Swinh. P. Z. S.* 1871, p. 388; *Dresser, B. Eur.* iv. p. 229, pl. 219 (1871); *Harting, Handb. Brit. B.* p. 111 (1872); *Sundev. Svensk. Fogl.* pl. lxv. figs. 3, 4 (1872); *Gould, B. Gr. Brit.* iii. pl. 24 (c. 1873); *Alst. & Harvie Brown, Ibis*, 1873, p. 63; *Cordeaux, Ibis*, 1875, p. 182, 1876, p. 128; *Newton, ed. Yarr. Brit. B.* ii. p. 29 (1876); *Tacz. Bull. Soc. Zool. France*, i. p. 175 (1876); *David & Oust. Ois. Chine*, p. 324 (1877); *Tacz. Bull. Soc. Zool. France*, iii. p. 138 (1878); *Blakist. & Pryer, Ibis*, 1878, p. 340; *Gätke, Ibis*, 1879, p. 103; *Finsch, Verh. z.-b. Gesellsch. Wien*, xxix.

p. 216 (1879); *Bolau, J. f. O.* 1880, p. 128, 1881, p. 59; *Giglioli, Ibis*, 1881, p. 202; *Clark, Ibis*, 1882, p. 182; *Seebohm, t. c.* p. 379; *Blakist. & Pryer, List B. Japan*, p. 169 (1882); *Tacz. Bull. Soc. Zool. France*, vii. p. 392 (1882); *B. O. U. List Brit. B.* p. 61 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90; *Seebohm, Hist. Brit. B.* ii. p. 140, pl. 15 (1884); *Blakist. Amended List B. Japan*, pp. 17, 60 (1884); *Giglioli, Avif. Ital.* p. 52 (1885); *Salvad. Elench. Ucc. Ital.* p. 165 (1887).

Le Gavoué de Provence, *Daubent. Pl. Enl.* 656. fig. 1; *Montb. Hist. Nat. Ois.* iv. p. 321 (1778).

Mustachoe Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 175 (1783).

Emberiza provincialis, *Gm. Syst. Nat.* i. p. 881 (1778); *Bp. Consp.* i. p. 463 (1850).

Emberiza lesbia (*nec Gm.*), *Temm. Man. d'Orn.* i. p. 317 (1820); *Werner, Atlas, Granivores*, pl. 25 (1827).

Emberiza borealis, *Zetterst. Resa Sver. och Norr. Lappm.* i. p. 107, tab. 1, 2 (1822).

Orospina provincialis, *Kaup, Natürl. Syst.* p. 154 (1829).

?Emberiza durazzii, ♀, *Bp. Faun. Ital., Ucc.* pl. 36. fig. 2 (1832–41).

Hypocentor rusticus, *Cab. Mus. Hein.* Th. i. p. 131, note (1850); *Bp. Rev. et Mag. de Zool.* 1857, p. 162; *Stejneger, Bull. U.S. Nat. Mus.* no. 29, p. 246 (1885).

Cynchramus provincialis, *Brehm, Naum.* 1855, p. 278.

Cynchramus rusticus, *Degl. et Gerbe, Orn. Eur.* i. p. 329 (1867).

Schœnicola rustica, *Doderl. Avif. Sicil.* p. 90 (1869).

Citrinella rustica, *Gray, Hand-l. B.* ii. p. 113, no. 7695 (1870).

Citrinella provincialis, *Gray, t. c.* p. 115, no. 7713 (1870).

Adult male in breeding-plumage. Above chestnut, streaked with black centres to the feathers of the mantle and back, these parts slightly varied with ashy margins to the feathers, these being a little more distinct on the lower back and rump, which are uniform; upper tail-coverts chestnut, with black centres; lesser wing-coverts chestnut; median and greater coverts black, externally pale rufous, with white tips, forming a double wing-bar; bastard-wing, primary-coverts, and quills blackish, externally edged with pale rufous, more ashy on the primaries, the inner secondaries plainly edged and tipped with chestnut; centre tail-feathers brown, with whity-brown edges; remainder of the tail-feathers blackish, with ashy-whitish margins, the penultimate feather with a long wedge-shaped mark of white along the inner web, the outer feather for the most part white, excepting an oblique black base to the inner web and a light brown mark near the end of the outer web; head black, with remains of white on the centre of the crown and nape; lores, feathers round the eye, cheeks, and ear-coverts black, with a white patch behind the latter and a broad superciliary streak of white from behind the eye above the ear-coverts; base of chin black; malar line and throat white, separated from the breast and abdomen, which are also white, by a chestnut band across the lower throat and fore neck, the flanks and sides of the breast also striped with chestnut; thighs and under tail-coverts, as well as the axillaries and under wing-coverts white, the lower series of the latter ashy, like the under surface

of the quills, which have whitish edges along the inner web. Total length 5 inches, culmen 0·45, wing 3, tail 2, tarsus 0·75.

Adult male in winter plumage. Differs from the summer plumage chiefly in its more fulvous tone of coloration, the distinctive markings of the adult bird being overlain with ashy-fulvous edges to the feathers; this is especially the case with the chestnut throat-band. The whole of the upper surface of the body is more ashy fulvous, with which the feathers are all broadly edged; the head is only a little darker than the back, by reason of the underlying black feathers of the next breeding-plumage, when the head becomes black by the wearing-off of the edges to the feathers; lores, feathers over the eye, and eyelid dull sandy brown, as also the ear-coverts and sides of the face, with a patch of black on the upper and on the hinder margin of the ear-coverts; cheeks and throat buffy whitish, separated from each other by a moustachial streak of black; the throat with a few small dusky spots; wings as in summer, but the light edges to all the feathers broader, and the white tips to the wing-coverts tinged with fulvous.

The *adult female* is browner than the male, and is streaked on the fore neck and chest, wanting the rufous on the head and throat. General colour above brown, streaked with blackish, the head like the back and similarly streaked; rump tinged with rufous; wings and tail as in the male, but the lesser wing-coverts brown instead of chestnut; under surface of body buffy white, inclining to isabelline on the throat; under tail-coverts white. Total length 5·5 inches, culmen 0·45, wing 2·95, tail 2·2, tarsus 0·7.

Nestling. Resembles the old female, but is more tawny, being sandy brown above, the head minutely spotted and the back broadly streaked with blackish brown; the margins to the wing-feathers and tail very broad, and sandy brown in colour; under surface of body sandy isabelline, minutely spotted with blackish on the lower throat and fore neck.

Young birds resemble the winter plumage of the adults, but are yellowish buff on the breast, and have the throat thickly spotted with dusky, and the fore neck and breast plentifully streaked with blackish brown; the margins to the wing-coverts are sandy buff, and they are not tipped with white.

Young birds in first winter plumage can only be distinguished from the adults by the greater amount of spotting on the breast, the chestnut shade being merely subterminal and not nearly so much developed as in the adults.

Hab. Northern Europe, extending to Eastern Siberia and Kamtschatka, and to China in winter.

a, b. ♂ ad. sk.	Archangel, April 1874.	Hume Coll.
c. ♀ juv. sk.	Archangel, June 13, 1874.	Hume Coll.
d. ♀ juv. sk.	Archangel, July 24 (*W. Meves*).	Salvin-Godman Coll.
e. ♂ juv. sk.	R. Dvina, Aug. 9 (*W. M.*).	Salvin-Godman Coll.

f. ♂ ad. sk.	Kultuk, Lake Baikal, April 5.	Purchased.
g, h. ♂ ♀ ad. sk.	Yokohama, Japan.	Prof. Milne [C.].
i. ♂ ad. sk.	Hakodadi, Oct. 22.	Henry Whitely [C.].
k. ♀ imm. sk.	Hakodadi, Feb. 26.	Henry Whitely [C.].
l. ♂ ad. sk.	Hakodadi, Oct. 29 (*H. W.*).	Gould Coll.
m. ♂ juv. sk.	Hakodadi, Nov. 6 (*H. W.*).	Gould Coll.
n. ♂ ad. sk.	Hakodadi, Oct. 20 (*H. W.*).	Gould Coll.
o. Ad. sk.	Shanghai.	Shanghai Museum.
p. Ad. sk.	Shanghai, Jan. 5, 1884.	F. W. Styan, Esq. [P.]

6. Emberiza fucata.

Emberiza fucata, *Pall. Reis. Russ. Reichs*, iii. p. 698 (1776); *Gm. Syst. Nat.* i. p. 871 (1788); *Pall. Zoogr. Rosso-Asiat.* ii. p. 41 (1811); *Keys. u. Blas. Wirb. Eur.* p. xxxix (1840); *Blyth, J. A. S. Beng.* xi. p. 601 (1842), xiii. p. 957 (1844); *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 464 (1850); *Temm. & Schl. Faun. Japon., Aves*, pl. lvii. (1850); *Swinh. Ibis*, 1860, p. 61, 1861, pp. 45, 334; *Blakist. Ibis*, 1862, p. 328; *Swinh. Ibis*, 1863, p. 378; *Jerd. B. Ind.* ii. p. 375 (1863); *Blyth, Ibis*, 1867, p. 42; *Beavan, t. c.* p. 141; *Whitely, t. c.* p. 202; *Tytler, Ibis*, 1868, p. 201; *Pelz. t. c.* p. 318; *Brooks, Ibis*, 1869, p. 458; *Gould, B. Asia*, v. pl. 9 (1869); *Borggr. Vogelf. Norddeutschl.* p. 72 (1869); *Swinh. Ibis*, 1870, p. 354; *id. P. Z. S.* 1871, p. 388; *Godwin-Austen, J. A. S. Beng.* 1874, p. 171; *Blyth & Wald. B. Burm.* p. 95 (1875); *Swinh. Ibis*, 1875, p. 121; *Tacz. J. f. O.* 1876, p. 198; *id. Bull. Soc. Zool. France*, i. p. 175 (1876); *David & Oust. Ois. Chine*, p. 332 (1877); *Anders. Zool. Exped. Yun-nan, Aves*, p. 603 (1878); *Tacz. Bull. Soc. Zool. France*, iii. p. 138 (1878); *Hume & Davison, Str. F.* 1878, p. 407; *Blakist. & Pryer, Ibis*, 1878, p. 242; *Hume, Str. F.* 1879, p. 107; *Blakist. & Pryer, B. Japan*, p. 169 (1882); *Oates, B. Brit. Burm.* i. p. 351 (1883); *Blakist. Amended List B. Japan*, p. 17 (1884).

Le Mitilène de Provence, *Daubent. Pl. Enl.* v. pl. 656. fig. 2; *Montb. Hist. Nat. Ois.* iv. p. 322 (1778).

Lesbian Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 404 (1783).

Emberiza lesbia, *Gm. Syst. Nat.* i. p. 882 (1788); *Gould, B. Eur.* iii. pl. 178 (1837); *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 464 (1850).

Spina lesbia, *Kaup, Natürl. Syst.* p. 153 (1829).

Euspiza fucata, *Blyth, Cat. B. Mus. As. Soc.* p. 129 (1849); *id. J. A. S. Beng.* xxiii. p. 215 (1854); *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 488 (1856).

Hypocentor fucatus, *Cab. Mus. Hein.* Th. i. p. 131, note (1850).

Cynchramus lesbius, *Brehm, Naum.* 1855, p. 278.

Onychospina fucata, *Bp. C. R.* xxxvii. p. 919; *id. Rev. et Mag. de Zool.* ix. p. 163 (1857).

Emberiza fuscata, *Radde, Reis. Sibir., Vög.* p. 176 (1863).

Citrinella fucata, *Gray, Hand-l. B.* ii. p. 113, no. 7694 (1870); *Hume, Nests and Eggs Ind. B.* p. 465 (1873); *id. & Oates, Str. F.* 1875, p. 157.

Citrinella lesbia, *Gray, Hand-l. B.* ii. p. 115, no. 7711 (1870).

Adult male. General colour above cinnamon-rufous, with distinct black centres to the feathers of the mantle and back, which also

show slight traces of ashy margins; lower back and rump uniform cinnamon-rufous, the upper tail-coverts light brown with blackish centres, the lateral ones externally whitish; scapulars and lesser wing-coverts deep cinnamon-rufous, the former with black centres; median and greater coverts black, broadly edged with rufous, paler and more creamy buff on the ends of the feathers; bastard-wing and primary-coverts dusky brown; quills black, externally rufous, inclining to creamy white on the edges of the primaries; tail-feathers blackish with ashy margins, the penultimate feather with a small wedge-shaped spot of white at the tip of the inner web, the outer feather for the most part white, excepting the shaft, a small mark towards the end of the outer web, and an oblique mark of blackish brown on the inner web; head and hind neck slaty grey, streaked with black, more minutely on the latter; lores creamy white; eyelid white; a small streak of whitish along the sides of the crown, not sufficient to form an eyebrow; ear-coverts bright chestnut, with a small white spot on the hinder margin; a larger white spot on the sides of the neck; cheeks and throat white, separated from each other by a broad black moustachial streak, which is united to a black collar, more or less brown, which crosses the lower throat, and is succeeded by a broad band of ashy white across the fore neck; this is again succeeded by a tolerably broad band of bright cinnamon-rufous across the chest, narrowing towards the centre, where it is somewhat broken; breast, abdomen, and under tail-coverts creamy white, slightly washed with fulvous on the sides; the flanks and sides of the body pale sandy brown, streaked with black; thighs externally brown, internally creamy buff; axillaries and under wing-coverts white, those near the edge of the wings with dusky bases; quills pale ashy below, whitish along the edge of the inner web: "bill brown, the lower mandible fleshy at base; feet flesh-coloured; iris brown" (*David*). Total length 5·75 inches, culmen 0·5, wing 2·05, tail 2·55, tarsus 0·8.

An adult male procured near Simla in July had the soft parts as follows:—Bill horny brown above, fleshy below with a bluish tinge; legs and feet brownish fleshy; iris dark hazel.

The male described is from Amoor-Land and was shot in May; it is therefore in breeding-plumage. Considerable difference is shown in the Himalayan specimens in nuptial dress, which are much deeper chestnut above with less strongly marked black centres to the dorsal feathers; the scapulars and both lesser and median wing-coverts are uniform chestnut; the black collar on the throat is broader and more complete, and the flanks are uniform chestnut. This may be only the full breeding-plumage of the adult, but it seems to me to indicate a distinct species, which may perhaps be worthy of the name of *E. arcuata*.

Adult female in breeding-plumage. Similar to the male, but not so brightly coloured nor so strongly marked; the black collar on the lower throat less pronounced and more broken; the rufous band on the breast not nearly so well marked as in the male and more

broken. Total length 5·3 inches, culmen 0·5, wing 2·75, tail 2·3, tarsus 0·8.

Adult male in winter plumage. More rufescent than in summer, the whole of the upper surface having broad fulvous or rufescent edges to the feathers; the head like the back and streaked with black in the same way; beneath the rufescent aspect of the feathers, the whole of the approaching summer plumage, *i. e.* the grey head, &c., can be traced; ear-coverts chestnut; lores, feathers round the eye, and cheeks tawny buff, the latter with a black line above and below; entire under surface yellowish buff, the black collar on the throat indicated by a number of black spots and streaks; the chestnut band on the breast similarly indicated; flanks browner and distinctly streaked with black: "upper mandible brown, lower mandible fleshy pink; legs and feet fleshy pink; iris brown" (*A. O. Hume*). Length 6·3 inches, wing 2·8, tail 2·5, tarsus 0·5 (measured in the flesh by *A. O. H.*).

Other males, shot on the 20th of February, in Manipur, by Mr. Hume, had the "legs and feet dull fleshy pink, brownish on the joints and claws; bill palish brown, paler and with a pinky tinge on all but the tip of the lower mandible," and "upper mandible brown, the lower one bluish horny pink; iris brown."

Young birds in first winter plumage. Greatly resemble the winter plumage of the adults, being fulvous brown above, streaked with black; the lower back, rump, and upper tail-coverts more chestnut, only the latter being streaked with black; the under surface is ochreous buff, streaked on the lower throat with black, the sides of the upper breast showing a more or less concealed shade of chestnut: "legs and feet pale fleshy; upper mandible brown, the lower one pale fleshy whitish" (*A. O. Hume*).

Hab. Eastern Siberia and Japan, and plentiful in Central and Eastern China; resident in the N.W. Himalayas; migrates in winter to Southern China, the Burmese countries, and the plains of India. Accidental in Europe.

a, b. ♂ ad.; *c.* ♀ ad. sk.	Amoor-Land, May.	Purchased.
d. ♂ juv. hiem. sk.	Yokohama, Japan.	Prof. Milne [C.].
e. Ad. hiem. sk.	Hakodadi, Oct. 20 (*H. Whitely*).	Gould Coll.
f. ♂ ad. sk.	Hakodadi, May 8 (*H. Whitely*).	Gould Coll.
g. Juv. hiem. sk.	Hakodadi, Oct. 4 (*H. Whitely*).	Henry Whitely [C.].
h. ♂ ad. sk.	South Manchuria, June 9, 1886.	H. E. M. James, Esq. [P.].
i. Juv. hiem. sk.	Shanghai.	Shanghai Museum.
k. Juv. hiem. sk.	Canton.	Gould Coll. [P.].
l. ♀ ad. hiem. sk.	Hainan, Feb.	Consul Swinhoe [C.].
m. ♂ ad. hiem. sk.	Hainan, Feb. (*R. Swinhoe*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Shupyun, N. Cashmere, June 13, 1871 (*W. E. Brooks*).	Hume Coll.
o. ♀ ad. sk.	Dhurmsala, May 1870 (*W. E. B.*).	Hume Coll.

p. ♂ ad. sk.	Dhurmsala, Cashmere.	Capt. Stackhouse Pinwill [P.].
q, r. [♂ ♀] ad. sk.	Sutlej Valley.	Hume Coll.
s. Ad. sk.	Sutlej Valley.	Hume Coll.
t. [♀] ad. sk.	Kotegurh, 1870.	Hume Coll.
u. [♂] ad. sk.	Kotegurh, Dec. 1868.	Hume Coll.
w. ♂ ad. sk.	Simla, July 13, 1876 (*C. T. Bingham*).	Hume Coll.
x. ♂ ad. sk.	Simla, July 14, 1877 (*W. Davison*).	Hume Coll.
y. [♀] ad. sk.	Deobund, 1868.	Hume Coll.
z. Ad. sk.	Masuri.	Hume Coll.
a', b'. ♂ ad.; *c'.* ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
d'. [♂] ad. sk.	Khalsi, Doon, May 29, 1868 (*G. F. L. Marshall*).	Hume Coll.
e'. ♂ ad. sk.	Kara in Gurhwal Babhur, Jan. 3, 1870 (*Dr. G. King*).	Hume Coll.
f'. Ad. sk.	Kumaon, 1867.	Hume Coll.
g', h'. [♂ ♀] ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
i'. Ad. sk.	Darjiling, 1868.	Hume Coll.
k'. [♀] ad. sk.	Bhootan Dooars, Feb. 1874 (*L. Mandelli*).	Hume Coll.
l', m'. [♂ ♀] ad. sk.	Khasia Hills (*T. C. Jerdon*).	Gould Coll.
n'. ♂ ad.; *o', p'.* ♂, *q'.* ♀ juv. sk.	Kossum Thall, Manipur, Feb. 10, 1881 (*A. O. H.*).	Hume Coll.
r'. ♂ ad. sk.	Manipur Valley, Feb. 20, 1881 (*A. O. H.*).	Hume Coll.
s'. ♂ ad. sk.	Manipur, March 7, 1881 (*A. O. H.*).	Hume Coll.
t', u'. ♂, *v'.* ♀ ad. sk.	Moirang, Manipur, March 23, 1881 (*A. O. H.*).	Hume Coll.
w'. ♂ imm. sk.	Sagam, Manipur, March 24, 1881 (*A. O. H.*).	Hume Coll.
x'. [♂] ad. sk.	Soognoo, Manipur, March 27, 1881 (*A. O. H.*).	Hume Coll.
y', z'. ♂ ad. sk.	Phalel, Manipur, April 11, 1881 (*A. O. H.*).	Hume Coll.
α. ♂ ad. sk.	Momien, Yun-nan, June 2, 1868.	Dr. J. Anderson [C.].
β, γ. ♂ ♀ ad. sk.	Paghein, Pegu, May 14.	Oates Coll.
δ. ♀ ad. sk.	Khykehto, Tenasserim, Feb. 10, 1876 (*W. Davison*).	Hume Coll.
ε. ♀ ad. sk.	Thatone, Feb. 11, 1877 (*W. Davison*).	Hume Coll.
ζ. ♀ ad. sk.	Thatone, Nov. 3, 1877 (*W. Davison*).	Hume Coll.
η. ♂ imm. sk.	Kedaikeglay, Dec. 14, 1877 (*W. Davison*).	Hume Coll.
θ. ♂ ad. sk.	Limestone rocks, near Moumenzeik, March 11, 1877 (*W. Davison*).	Hume Coll.
ι. ♂ ad. sk.	Moulmein, March 11, 1877 (*W. Davison*).	Hume Coll.
κ. ♀ ad. sk.	Bengal (*As. Soc.*).	India Museum.
λ. ♂ ad. sk.	[India.]	Gould Coll.

7. Emberiza elegans.

Emberiza elegans, *Temm. Pl. Col.* iii. pl. 583 (1835); *Gray, Gen. B.* ii. p. 377 (1844); *Temm. & Schl. Faun. Jap., Aves*, p. 93, pl. 55 (1850); *Bp. Consp.* i. p. 464 (1850); *Radde, Reis. Sibir., Vög.* p. 165, pl. 5 (1863); *Prjev. Voy. Ussuri*, no. 49 (1857–69); *Swinh. P. Z. S.* 1871, p. 388; *David, N. Arch. Mus.* vii. *Bull.* p. 10 (1871); *Dybowski, J. f. O.* 1875, p. 253; *Tacz. Bull. Soc. Zool. France*, i. p. 176 (1876); *Swinh. Ibis*, 1877, p. 145; *David & Oust. Ois. Chine*, p. 322 (1877); *Tacz. Bull. Soc. Zool. France*, iii. p. 137 (1878); *Blakist. & Pryer, Ibis*, 1878, p. 242; *iid. B. Japan*, p. 169 (1882); *Blakist. Amended List*, p. 26 (1884).

Emberiza elegantula, *Swinh. P. Z. S.* 1870, p. 134, 1871, p. 388; *David & Oust. Ois. Chine*, p. 323 (1878).

Citrinella elegantula, *Gray, Hand-l. B.* ii. p. 113, no. 7686 (1870).

Citrinella elegans, *Gray, Hand-l. B.* ii. p. 113, no. 7685 (1870).

Euspiza elegans, *Gould, B. Asia*, pl. 12 (1880).

Adult male in breeding-plumage. General colour above chestnut-brown, mesially streaked with black on the mantle and back, the feathers of which have sandy-white margins; lower back, rump, and upper tail-coverts uniform ashy grey, the latter slightly washed with chestnut; scapulars like the back; lesser wing-coverts ashy grey; median and greater coverts blackish, tipped with sandy buff, whitish at the ends, forming a double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy brown, greyer on the primaries, the secondaries externally pale rufous like the greater coverts; centre tail-feathers ashy, the remainder blackish, edged with ashy brown, with a long wedge-shaped mark of white on the inner web of the penultimate feather, the outer one being almost entirely white, with an oblique black mark at the base of the inner web, and a longitudinal dusky mark near the tip of the outer one; crown of head black and strongly crested, separated from the nape (which is also black) by a circlet of pale yellow, which commences above the eye and encircles the occiput; this yellow band continued over the lores and across the forehead in a narrow white band; base of forehead, lores, feathers round the eye, cheeks, and ear-coverts black, with a white band above the latter; hinder neck and sides of neck ashy grey, minutely mottled with black spots; throat bright lemon-yellow, with a narrow black line across the base of the chin; on the fore neck and chest a large triangular patch of black, separated from the yellow throat by a band of white, which crosses the lower throat; sides of chest and under surface of body white, including the thighs and under tail-coverts; sides of body streaked with ferruginous, broader on the flanks, which are centred with blackish; axillaries and under wing-coverts white; quills dusky below, ashy whitish along the inner web: "bill black in the breeding-season, brown in winter; feet flesh-colour; iris brown" (*A. David*). Total length 5·6 inches, culmen 0·45, wing 3, tail 2 55, tarsus 0·75.

A peculiar irregularity of colouring is seen in the innermost secondaries of both sexes in this species, where there is an indentation of the chestnut margin on the outer web, while the light base of

the inner web, extending far up the latter leaves only an irregular black mark towards the end of the feather.

Adult male in winter plumage. Much more rufous than in summer, the whole of the plumage of the upper surface being suffused with rufous, with which the feathers are tipped and edged, the black of the head and face, as well as the throat-patch, being obscured by reddish brown, as also is the grey of the hind neck and rump; the yellow ring on the head and the yellow throat duller and tipped with tiny dusky spots; edges to wing-coverts and quills more rufous than in summer; the white on the throat washed with brown.

Adult female. Much duller in colour than the male and without the ashy on the hind neck and lower back, which is chestnut, with the usual black streaks and light margins to the feathers; top of head chestnut-rufous, with black bases to the feathers, the yellow circlet round the occiput much less distinct than in the male, duller and more saffron-yellow, as are also the cheeks and throat; under surface of body dull white, with a concealed chest-patch of black; ear-coverts dark chestnut-brown. Total length 5 inches, culmen 0·4, wing 2·8, tail 2·55, tarsus 0·75.

Young female. Differs from the adult female in having no yellow on the coronal ring or on the cheeks and throat, which are pale tawny buff.

The type of *E. elegantula*, Swinhoe, is in Mr. Seebohm's collection, and is apparently a young female of the present species, with streaks on the chest and the eyebrow and throat pale sandy buff. The wing only measures 2·55 inches, but this is probably due to some extent to immaturity.

Hab. Eastern Siberia and main island of Japan, extending into China in winter as far west as Moupin; accidental in Europe.

a. ♂ ad. sk.	Amoor Land, May.	Dr. Lenz.
b, c. ♂ ♀ ad. sk.	Pekin, N. China (*J. W. Larking*).	Gould Coll.
d. ♂ ad. sk.	Japan.	Gould Coll.
e, f. ♂ ad. sk.	Nagasaki, Japan.	F. Ringer, Esq. [P.].
g. ♂ ad. sk.	Nagasaki, Dec. 9.	F. Ringer, Esq. [P.].
h. ♀ ad. sk.	Nagasaki, Feb. 23.	F. Ringer, Esq. [P.].

8. Emberiza chrysophrys.

Emberiza chrysophrys, *Pall. Reis. Russ. Reichs*, iii. Anhang, p. 698 (1776); *id. Zoogr. Rosso-Asiat.* ii. p. 46, pl. 48. fig. 2 (1811); *Selys-Longch. Faun. Belge*, p. 81, pl. 4 (1842); *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 464 (1850); *Radde, Reis. Sibir., Vög.* Taf. iv. figs. 1 *a*, 1 *b*, 1 *c* (1863); *De la Font. Faune Luxemb.* p. 105 (1865); *Bree, B. Eur.* iii. pl. to p. 63 (1866); *Degl. et Gerbe, Orn. Eur.* i. p. 319 (1867); *Dresser, B. Eur.* iv. p. 193, pl. 212 (1871); *Tacz. Bull. Soc. Zool. France*, i. p. 176 (1876); *David & Oust. Ois. Chine*, p. 325 (1877); *Tacz. Bull. Soc. Zool. France*, iv. p. 137 (1879).

Hypocentor chrysophrys, *Bp. Rev. et Mag. de Zool.* 1857, p. 162.

Citrinella chrysophrys, *Gray, Hand-l. B.* ii. p. 113, no. 7692 (1870).

Emberiza chlorophrys (err.), *David, N. Arch. Mus.* iii. *Bull.* p. 31 (1867).

Adult male. General colour above reddish brown, streaked with black, the feathers of the mantle and back edged with ashy; lower back, rump, and upper tail-coverts uniform dull chestnut; lesser wing-coverts ashy brown; median coverts blackish, tipped with ashy white; greater coverts blackish, edged with reddish brown, creamy buff externally; bastard-wing dusky, edged with rufous; primary-coverts dusky, externally fringed with ashy; quills dusky blackish, externally rufous, the primaries edged with whity brown; the inner secondaries with a dusky blackish spot at a little distance from the base of the outer web; centre tail-feathers brown, washed with rufous externally: remainder of the feathers blackish, the two outer ones with an oblique white mark on the inner web, more extended on the outermost feather, which is white for the basal half of the outer web also; crown of head black, with a white stripe down the centre of the crown, becoming tinged with yellow on the forehead; a broad superciliary streak of clear yellow, forming an eyebrow, which becomes white posteriorly; upper edge of eyelid yellow; lores, feathers round eye, and a streak from the eye above the ear-coverts black; the latter brown, blackish on the lower parts, and with a white spot above the hinder margin; cheeks white, separated from the throat by a dusky malar line; sides of neck ashy grey with dusky streaks; under surface of body white, the throat with a few blackish spots; the fore neck tinged with fulvous and streaked with blackish, less pronounced on the breast, the sides of the latter having a chestnut tinge; sides of body and flanks fulvescent, rather broadly streaked with black, the stripes tinged with chestnut laterally; thighs and under tail-coverts white, the long ones of the latter mesially streaked with black; under wing-coverts and axillaries white, with ashy bases; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·45, wing 3·05, tail 2·45, tarsus 0·75. (*Mus. H. Seebohm.*)

Adult female. Similar to the male, but browner on the head; the sides of the crown washed with chestnut, the ear-coverts pale brown, and the stripes on the lower surface not so distinct as in the male. Total length 5·8 inches, culmen 0·5, wing 2·95, tail 2·3, tarsus 0·7. (*Mus. H. Seebohm.*)

Hab. Eastern Siberia.

9. Emberiza flaviventris.

Ortolan à ventre jaune du Cap de Bonne Espérance, *Daubent. Pl. Enl.* v. pl. 664. fig. 2; *Montb. Hist. Nat. Ois.* iv. p. 326 (1778).
Emberiza flav. (!), *Bodd. Tabl. Pl. Enl.* p. 41 (1783).
Cape Bunting, var. *a*, *Lath. Gen. Syn.* ii. pt. i. p. 184 (1783).
Emberiza capensis, var. *a*, *Gm. Syst. Nat.* i. p. 878 (1786).
Passerina flaviventris, *Bonn. et Vieill. Enc. Méth.* ii. p. 929 (1823).
Emberiza xanthogaster, *Cretzschm. in Rüpp. Atlas*, p. 38, tab. 25 (1826); *Steph. Gen. Zool.* xiv. p. 18 (1826); *Rüpp. Neue Wirb. Vög.* p. 86 (1835–40).
Yellow-bellied Bunting, *Lath. Gen. Hist.* v. p. 317 (1822).
Fringillaria capensis, *Swains. B. W. Afr.* i. p. 111, pl. 18 (1837, *nec Gm.*).

Emberiza quinquestriata, *Licht. Descr. Anim.* p. 405 (1844, *ex Forst. Icon. ined. C*).

Fringillaria flaviventris, *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 467 (1850); *Hartl. Orn. W.-Afr.* p. 151 (1857); *Gurney, Ibis*, 1860, p. 213; *Hartl. J. f. O.* 1861, p. 260; *Antin. Cat. descrr. Ucc.* p. 74 (1864); *Layard, B. S. Afr.* p. 206 (1867); *Gray, Hand-l. B.* ii. p. 115, no. 7717 (1870); *Heugl. Orn. N.O.-Afr.* iv. App. p. cxlvii (1871); *Ayres, Ibis*, 1871, p. 258; *Sharpe, Cat. Afr. B.* p. 70 (1871); *Gurney, in Anderss. B. Dam.-Ld.* p. 188 (1872); *Antin. & Salvad. Viagg. Bogos*, p. 113 (1873); *Buckley, Ibis*, 1874, p. 382; *Shelley, Ibis*, 1875, p. 81; *Bocage, Orn. Angola*, p. 370 (1877–81); *Sharpe, in Oates' Matabele Land*, App. p. 322 (1881); *Holub & Von Pelz. Beitr. Orn. Südafr.* p. 135 (1882); *Shelley, Ibis*, 1882, p. 358; *Butler, Feilden & Reid, Zool.* 1882, p. 302; *Sharpe, ed. Layard's B. S. Afr.* pp. 491, 851 (1884).

Emberiza flavigaster, *Rüpp. Syst. Uebers.* p. 78 (1845); *Bianc. Spec. Zool. Mosamb.* fasc. xvi. p. 327 (1865).

Fringillaria flavigaster, *Heugl. Syst. Uebers.* p. 42 (1856); *Gray, Gen. B.* ii. p. 378 (1844).

Polymitra flaviventris, *Cab. Mus. Hein.* Th. i. p. 129 (1850).

Polymitra flavigastra, *Cab. Mus. Hein.* Th. i. p. 129 (1850); *id. J. f. O.* 1878, p. 221; *Fischer & Reichen. J. f. O.* 1879, p. 353; *Fischer, Zeitsch. ges. Orn.* i. p. 319 (1884).

Emberiza flavigastra, *Licht. Nomencl. Av.* p. 42 (1854).

Euspiza xanthogastra,
Megalotis quinquevittatus,
Emberiza affinis,
Emberiza albicollis,
} *Pr. Württ. MSS.* (!!), *teste Heugl. J. f. O.* 1867, p. 297.

Emberiza flaviventris, *Finsch & Hartl. Vög. Ostafr.* p. 458 (1870); *Blanf. Geol. & Zool. Abyss.* p. 411 (1870); *Finsch, Trans. Z. S.* vii. p. 270 (1870); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 663 (1871); *Schalow, J. f. O.* 1883, p. 364.

Adult male in summer plumage. Mantle and back uniform chestnut, with an ashy-grey shade on the hind neck, separating the head from the mantle; lower back, rump, and upper tail-coverts ashy grey, the latter narrowly fringed with whitish edges; scapulars like the back; lesser wing-coverts ashy grey; median series white with black bases, forming a large patch; greater coverts blackish, externally ashy, white at the ends, forming a bar; bastard-wing and primary-coverts black, the latter slightly fringed with white at the ends; quills blackish, edged with ashy whitish, the inner secondaries with chestnut; tail-feathers blackish, margined with ashy, the four outer ones tipped with white, which increases towards the outermost feather, this being white along the whole of the outer web as well, with the exception of a blackish spot near the end; crown of head black, with a median streak of white down the centre; lores and eyebrow white, followed by a black streak through the eye along the upper half of the ear-coverts; this streak again followed by a broad white streak below the eye along the lower half of the ear-coverts; entire cheeks black, forming another broad band; on the sides of the neck a white patch; base of chin white; entire throat, breast, and centre of abdomen yellow as far as the vent, the fore neck and chest deepening into orange; sides of upper breast, sides of body, and thighs pale ashy grey; sides of abdomen

and under tail-coverts white; axillaries and under wing-coverts white; quills ashy below, whitish along the edge of the inner web. Total length 6·5 inches, culmen 0·5, wing 3·2, tail 2·85, tarsus 0·7.

The *adult male in winter plumage* differs from the summer plumage only in having the back varied with ashy-fulvous margins to the feathers of the mantle and back, and in having the white streaks on the head and face washed with fulvous; the sides of the upper breast and flanks washed with pale ashy brown instead of greyish.

Adult female. Differs from the male only in having the back darker chestnut or maroon, broadly streaked with black centres to the feathers of the mantle, upper back, and scapulars. This streaking of the back seems to be especially strong in young birds in their first winter plumage.

Young. Resembles the adult female, and has the back streaked with black; the facial markings dusky blackish and ochreous buff, the latter very strongly pronounced on the coronal streak; the yellow of the underparts duller, with a tinge of saffron on the fore neck. After the moult into the first winter plumage, the above conditions of plumage are intensified, and the ochreous-buff streak on the crown is very broad and distinct.

Specimens from N.E. Africa (true *E. flaviventris* of Rüppell) are smaller (wing 3·0–3·05 inches), and have a black mark at the end of the outer web of the penultimate tail-feather as well as on the outermost, while at the same time the white tip never seems to extend on the fourth feather, only the three outer ones being so marked.

Hab. South-eastern Africa, through the Transvaal to the Zambesi and to Damara-Land and Benguela in S.W. Africa; N.E. Africa.

a. ♂ ad. sk.	Eland's Post, S.E. Africa, June (*T. C. Atmore*).	Sharpe Coll.
b. ♂ imm. sk.	Eland's Post, July (*T. C. A.*).	Sharpe Coll.
c. [♀] ad. sk.	Eland's Post (*T. C. A.*).	Sharpe Coll.
d. [♀] ad. sk.	Kingwilliamstown.	Capt. Trevelyan [P.].
e. ♀ ad. sk.	Pinetown, Natal, Nov. 5 (*T. L. Ayres*).	Sharpe Coll.
f. ♂ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Coll.
g. ♂ ad. sk.	Kanye, Matabele-Land (*Dr. Exton*).	Sharpe Coll.
h. ♂ ad. sk.	Tati, Matabele-Land, Oct. 10 (*F. Oates*).	W. E. & C. G. Oates, Esqrs. [P.].
i. Juv. sk.	Inchlangin, Dec. (*F. O.*).	W. E. & C. G. Oates, Esqrs. [P.].
k. ♂ ad. sk.	Between Gokwe and Serule, Oct. 17 (*F. O.*).	W. E. & C. G. Oates, Esqrs. [P.].
l. Ad. sk.	1st Makalaka Kraal, Zambesi Road, Aug. 19 (*F. O.*).	W. E. & C. G. Oates, Esqrs. [P.].
m. Imm. sk.	Tete, Zambesi (*Sir J. Kirk*).	Livingstone Exped.
n. ♂ ad. sk.	Ondonga, Ovampo-Land, Oct. 10 (*C. J. Andersson*).	Sharpe Coll.
o. ♂ ad. sk.	Leopoldville, Upper Congo, Oct.	F. Bohndorff [C.].
p. Imm. sk.	Abyssinia.	Dr. Rüppell [C.].
q. Ad. sk.	Abyssinia.	W. T. Blanford, Esq. [C.].
r. ♂ ad. sk.	Senafe, Tigré, May 22 (*W. Jesse*).	Sharpe Coll.
s. ♀ juv. sk.	Rairo, Bogos, Aug. 14 (*W. Jesse*).	Sharpe Coll.

10. Emberiza forbesi.

Fringillaria forbesi, *Hartl. Orn. Centralbl.* 1882, p. 92; *id. J. f. O.* 1882, p. 324; *id. Abhandl. nat. Verein. Bremen*, viii. p. 284 (1883).

Similar to *E. flaviventris*, but smaller, with the belly purer yellow, and with no white spots or bars on the wing.

Hab. Equatorial Africa.

a. ♂ ad. sk. Kuterma, Equatorial Africa, May 26, 1883. Emin Pacha [P.].

11. Emberiza major.

Fringilla cabanisi (*nec Reichen.*), *Bocage, Orn. Angola*, p. 371 (1881).
Fringillaria major, *Bocage, Orn. Angola*, p. 559 (1881); *id. Jorn. Lisb.* pt. xxxiv. pp. 77–79 (1882); *Shelley, P. Z. S.* 1882, p. 308.
Polymitra (Fringillaria) major, *Cab. J. f. O.* 1880, p. 349, tab. ii. fig. 2.

Adult male. General colour above streaked, the feathers rufous-brown with broad black centres, and pale ashy-brown margins to the feathers of the mantle and back; lower back, rump, and upper tail-coverts dark ashy grey, the feathers of the upper back mottled with black centres; lesser wing-coverts black, edged with ashy grey; median coverts white with concealed white bases; greater coverts black, edged with light brown and tipped with white; bastard-wing, primary-coverts, and quills blackish, edged with whity brown, ashy whitish along the margins of the primaries and outer secondaries; tail-feathers brown, edged with lighter brown, the three outer ones with a wedge-shaped mark of white on the inner web, increasing on the outermost, where it extends to the base, leaving an oblique mark of brown at the basal two-thirds of the inner web, and a long mark of pale brown along the end of the outer web; crown of head like the back, rufous-brown broadly streaked with black, with a broad median line of white; lores, feathers round the eye, and ear-coverts black, surmounted by an eye-brow of white; ear-coverts with a white posterior patch, and a distinct line of white behind them; cheeks black, with a narrow inferior line of white; chin white; throat and under surface of body yellow; sides of neck grey, as also the sides of the breast, sides of body, and flanks; thighs, vent, and under tail-coverts white; under wing-coverts and axillaries white, with blackish bases to those near the edge of the wing; quills below dusky, ashy whitish along the inner edge: "upper mandible blackish, the lower one reddish, with the point brown; iris brown" (*Anchieta*). Total length 7·5 inches, culmen 0·5, wing 3·65, tail 2·8, tarsus 0·8. (*Mus. G. E. Shelley.*)

Hab. Augola.

12. Emberiza orientalis.

Fringillaria orientalis, *Shelley, P. Z. S.* 1882, p. 308.

Adult male (type of species). Similar to *E. major*, but smaller. Total length 5·8 inches, culmen 0·6, wing 3·25, tail 2·5, tarsus 0·85. (*Mus. G. E. Shelley.*)

Hab. Eastern Africa.

a. ♂ ad. sk. Leopoldville, Upper Congo, Dec. F. Bohndorff [C.].

13. Emberiza cabanisi.

Emberiza flaviventris (*nec V.*), *Reichen. J. f. O.* 1875, p. 42.
Polymitra (Fringillaria) cabanisi, *Reichen. J. f. O.* 1875, p. 233, Taf. ii. figs. 2, 3.
Fringillaria cabanisi, *Shelley, P. Z. S.* 1882, p. 308.

Adult male. Similar to *E. major*, but with the throat white.
Hab. Cameroons, W. Africa, and Equatorial Africa.

a. ♀ ad. sk. Ichgasi, Equatorial Africa, Aug. 1, 1883. Emin Pacha [P.].

14. Emberiza melanocephala.

Emberiza melanocephala, *Scop. Ann.* i. p. 142 (1769); *Temm. Man. d'Orn.* i. p. 393 (1820); *Naum. Vög. Deutschl.* iv. Taf. 101. fig. 2 (1824); *Roux, Orn. Prov.* pls. 104 bis, 104 ter (1825); *Werner, Atlas, Granivores*, pl. 20 (1827); *Sykes, P. Z. S.* 1832, p. 93; *Ménétr. Cat. Rais. Cauc.* p. 40 (1832); *St.-Hilaire, Expl. Sci. Morée*, pl. iv. fig. 1 (1833); *Gould, B. Eur.* iii. pl. 172 (1837); *Schl. u. Susem. Vög. Eur.* Lief. v. Taf. 4 (1839); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 172 (1840); *Jerd. Madr. Journ.* xi. p. 29 (1840); *Blyth, J. A. S. Beng.* xiii. p. 957 (1844); *Burgess, P. Z. S.* 1854, p. 160; *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 152 (1859); *Linderm. Vög. Griechenl.* p. 51 (1860); *Powys, Ibis*, 1860, p. 139; *Simpson, t. c.* p. 280; *Gätke, Ibis*, 1862, p. 390; *Blasius, t. c.* p. 71; *Sperling, Ibis*, 1864, p. 280; *Filippi, Viagg. Pers.* p. 349 (1865); *Gould, Ibis*, 1869, p. 128; *Wright, t. c.* p. 246; *Elwes & Buckley, Ibis*, 1870, p. 193; *Harting, Handb. Brit. B.* p. 172 (1872); *Cordeaux, Ibis*, 1875, p. 183; *Dresser, B. Eur.* iv. p. 151, pl. 206 (1872); *Danf. Ibis*, 1877, p. 272, 1878, p. 22; *Gätke, Ibis*, 1879, pp. 104, 379, 388; *Seebohm, Ibis*, 1882, p. 217, 1883, p. 11; *B. O. U. List Brit. B.* p. 59 (1883); *Seebohm, Hist. Brit. B.* ii. p. 165 (1884).
Tanagra melanictera, *Güldenst. N. Comm. Acad. Sci. Imp. Petrop.* xix. p. 466 (1775).
Black-headed Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 198 (1783).
Fringilla crocea, *Vieill. Ois. Chant.* pl. 27 (1805).
Xanthornus caucasicus, *Pall. Zoogr. Rosso-Asiat.* i. p. 428 (1811).
Passerina melanocephala, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 28 (1817); *Degl. & Gerbe, Orn. Eur.* i. p. 304 (1867); *Doderl. Avif. Sicil.* p. 85 (1869); *Salvad. Faun. Ital., Ucc.* p. 136 (1871); *Giglioli, Iconogr. Avif. Ital.* pt. 17 (1881).
Emberiza granativora, *Ménétr. Cat. Rais. Cauc.* p. 40 (1832).
Euspiza melanocephala, *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Gray, Gen. B.* ii. p. 376 (1844); *Blyth, Cat. B. Mus. As. Soc.* p. 128 (1849); *Bp. Consp.* i. p. 488 (1850); *Tristr. Ibis*, 1859, p. 33; *Jerd. B. Ind.* ii. p. 378 (1863); *Tristr. Ibis*, 1867, p. 368; *Fritsch, Vög. Eur.* tab. 17. fig. 6 (1870); *Gould, B. Gt. Br.* iii. pl. 28 (c. 1870); *Gray, Hand-l. B.* ii. p. 112, no. 7675 (1870); *Gould, B. Asia*, v. pl. 13 (1870); *James, Str. F.* 1871, p. 421; *Brooke, Ibis*, 1873, p. 246; *Butler, Str. F.* 1875, p. 497; *Newt. ed. Yarr. Brit. B.* ii. p. 64 (1876); *Blanf. East. Persia*, ii. p. 260 (1876); *Fairb. Str. F.* 1876, p. 261; *James, Str. F.* 1877, p. 61; *Butler, Str. F.* 1878, vol. ii. p. 184; *Ball, t. c.* p. 223; *Bogd. B. Cauc.* p. 69 (1879); *Hume, Str. F.* 1879, p. 107; *Bidd. Ibis*, 1881, p. 81; *Scully, t. c.* p. 586; *C. Swinh. Ibis*, 1882, p. 114; *Tristr. t. c.* p. 405; *id. Faun. & Flor. Palest.* p. 71 (1884); *Radde,*

Orn. Canc. p. 189 (1884); *Murray, Vertebr. Faun. Sind*, p. 188 (1884); *C. Swinh. & Barnes, Ibis*, 1885, p. 129; *Giglioli, Avif. Ital.* p. 45 (1885); *Salvad. Elench. Ucc. Ital.* p. 161 (1887).

Euspiza simillima, *Blyth, J. A. S. Beng.* xviii. p. 811 (1849); *id. Cat. B. Mus. As. Soc.* p. 128 (1849); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 486 (1856); *Gray, Hand-l. B.* ii. p. 112, no. 7676 (1870); *Hume, Nests & Eggs Ind. B.* p. 466 (1873).

Euspiza atricapilla, *Brehm, Naum.* 1855, p. 277.

Adult male in breeding-plumage. Above light bay or orange-chestnut, paler on the rump, and slightly washed with yellow; upper tail-coverts ashy, with yellow margins; lesser wing-coverts like the back, but with ashy margins; median and greater coverts, bastard-wing, primary-coverts, and quills blackish brown, broadly edged with isabelline-brown, whiter on the median and greater series, and more rufescent on the inner secondaries; tail-feathers dark brown, edged with whity brown externally and with white on the inner web; crown of head, lores, sides of face, and ear-coverts black; cheeks and sides of neck bright golden yellow, extending on the hind neck, where it forms a collar, mixed with bay like the back; entire under surface of body bright golden yellow, somewhat ashy on the thighs, and washed with bay; axillaries and under wing-coverts pale yellow, with light isabelline bases; quills dusky below, ashy fulvous along the inner web: "bill pearly grey, dingy on the upper mandible; legs and feet fleshy brown, dingy on the toes, or fleshy pink, with the feet plumbeous; iris reddish brown" (*A. O. Hume*). Total length 7 inches, culmen 0·6, wing 3·65, tail 2·9, tarsus 0·9.

Other males, collected in Jodhpur by Mr. Hume, had the soft parts as follows:—"Iris brown; upper mandible dusky brown, lower mandible bluish grey; bill bluish grey, dusky on the culmen; legs and feet fleshy brown, darker on the feet."

Colonel E. A. Butler gives the following memoranda on the males collected by him at Belgaum in January and February 1880:—"Iris dark brown; legs and feet fleshy brown; bill pale greenish horn-colour, browner on the culmen." The females had the soft parts similarly coloured.

Adult male in winter plumage. Differs from the summer plumage in being entirely obscured by ashy margins to the feathers, so that the black of the head and the chestnut of the back are alike hidden; the yellow of the underparts is also dulled by ashy margins to the feathers, especially on the flanks.

Young males in winter plumage may be distinguished by their brown ear-coverts and the stripes of black down the middle of the dorsal feathers, in which respect they resemble the females; the yellow of the underparts is also not so brilliant as in the adults: "bill bluish grey, brownish on the culmen; legs and feet fleshy brown, dusky on the feet; iris brown" (*A. O. Hume*).

The *old female in breeding-plumage* is pale chestnut on the upper surface, washed with yellow on the lower back and rump; the head

brown, streaked with black; otherwise as in the female above described, except that there is a tinge of orange on the breast: "bill bluish grey on the lower mandible, the upper mandible darker; legs and feet fleshy brown, dusky on the toes; iris brown" (*A. O. Hume*). Total length 6 inches, culmen 0·55, wing 3·35, tail 2 6, tarsus 0·85.

The *females and young birds in winter plumage* resemble corresponding stages in the plumage of *E. luteola*, and both species have the rump washed with yellow. There is always, however, a tinge of chestnut on the lower back in *E. melanocephala*, which is not observable in *E. luteola*.

The *young female in first breeding-plumage* differs from the male in wanting the black head; the whole of the upper surface being brown, streaked with black down the middle of the feathers, more distinctly on the crown; lower back and rump nearly uniform pale chestnut, obscured by ashy edges to the feathers; the upper tail-coverts slightly washed with yellow; sides of neck yellow; round the hind neck a slight tinge of chestnut; lores and feathers round eye ashy white; ear-coverts pale brown, with a slight indication of black below the eye: under surface of body pale yellow, light isabelline on the sides of the body and flanks. Total length 6·5 inches, culmen 0·55, wing 3·35, tail 2·65, tarsus 0·8.

Hab. Southern Europe from Asia Minor and Greece westwards to Southern Germany and Southern France, eastwards to North-western and Central India.

a, b. ♂ ad. sk.	Greece.	Consul Merlin [C.].
c. ♂ ad. sk.	Athens.	Consul Merlin [C.].
d. ♂ ad. sk.	Turkey, July 9, 1877 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. st.	Aidir, Asia Minor, June 9, 1883.	Purchased.
f. ♂ ad. sk.	Smyrna.	Gould Coll.
g. ♂ ad. sk.	Banias, May 3, 1864 (*H. B. Tristram*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Akûrah, Lebanon, June 17, 1864 (*H. B. T.*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Banias.	Canon Tristram [C.].
k. ♀ ad. sk.	Mount Hermon.	Canon Tristram [C.].
l. ♂ ad. sk.	R. Volga.	Gould Coll.
m. ♂ ad. sk.	Persia.	Purchased.
n, o. ♂; *p.* ♀ ad. sk.	Persia.	C. Darwin, Esq. [P.].
q. ♂ ad. sk.	Mashish, S.W. of Karman, May 20, 1872.	W. T. Blanford, Esq. [C.].
r, s. ♂ ad. sk.	Bushire.	A. J. V. Palmer, Esq. [P.].
t. ♂ ad. sk.	Bampur, Baluchistan, April 4, 1872.	W. T. Blanford, Esq. [C.].
u, v, w. ♂; *x, y.* ♀ ad. sk.	Nal, Khelat, April 1877 (*O. T. Duke*).	Hume Coll.
z, a'. ♂ ad. sk.	Mount Abu, April 14, 1875	Hume Coll.

b'–g'. ♂; *h'–l'*. ♀ ad.; *m'*, *n'*. ♂ juv. sk.	Jodhpur, Rajputana, Apr. 1868 (*A. O. H.*).	Hume Coll.
o'. ♂ ad. sk.	Sultanpur, Gurgaon district, Apr. 6, 1877 (*W. N. Chill*).	Hume Coll.
p', *q'*, *r'*. ♂ ad.; *s'*, *t'*, *u'*. ♀ ad. sk.	Saugor district, Dec. 1869.	Hume Coll.
v'. ♂ ad. sk.	Dhulia, Khandeish, Oct. 2, 1880 (*J. Davidson*).	Hume Coll.
w', *x'*. ♂ ad. sk.	Shada, Khandeish, Nov. 20, 1880 (*J. D.*).	Hume Coll.
y', *z'*. ♂ ad. sk.	Malpur, Khandeish, Jan. 23, 1881 (*J. D.*).	Hume Coll.
a. ♀ ad. sk.	Kussumb, Khandeish, Jan. 14, 1881 (*J. D.*).	Hume Coll.
β. ♂ ad. sk.	Nandurbar, Khandeish, Feb. 24, 1880 (*J. D.*).	Hume Coll.
γ, *δ*. ♂ ad. sk.	Belgaum, Jan. 25, 1880 (*E. A. Butler*).	Hume Coll.
ε, *ζ*. ♂; *η*, *θ*, *ι*. ♀ ad. sk.	Belgaum, Feb. 15, 1880 (*E. A. B.*).	Hume Coll.
κ. ♂ ad. sk.	Belgaum.	Gould Coll.
λ, *μ*. ♂ ad. sk.	Deccan (*Sykes*).	India Museum.
ν. ♂ ad. sk.	Deccan (*Burgess*).	Gould Coll.
ξ, *o*. Skeletons.		Purchased.

15. Emberiza luteola.

Emberiza luteola, *Sparrm. Mus. Carls.* fasc. iv. Taf. 93 (1786, fig. pess.); *Dresser, Ibis*, 1875, p. 249; *Severtz. Ibis*, 1883, p. 60; *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90.

Luteous Bunting, *Lath. Gen. Syn. Suppl.* ii. p. 203 (1801).

Yellow Grosbeak, var. *a*, *Lath. Gen. Hist. B.* v. p. 243 (1822).

Emberiza icterica, *Eversm. Add. Pall. Zoogr. Rosso-Asiat.* ii. Taf. 10 (1835); *Blyth, J. A. S. Beng.* xiii. p. 957 (1844); *Hutton, op. cit.* xvi. p. 779 (1847).

Emberiza brunneiceps, *Brandt, Bull. Sci. Acad. St. Pétersb.* ix. p. 11 (1842); *Gray, Gen. B.* ii. p. 377 (1844).

Euspiza icterica, *Gray, Gen. B.* ii. p. 376 (1844).

Euspiza luteola, *Blyth, Cat. B. Mus. As. Soc.* p. 127 (1849); *Bp. Consp.* i. p. 469 (1850); *Cab. Mus. Hein.* i. p. 130 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 486 (1856); *Jerd. B. Ind.* ii. p. 378 (1863); *Gray, Hand-l. B.* ii. p. 112, no. 7677 (1869); *Hume, Str. F.* iii. p. 498 (1875); *Wardlaw Ramsay, Ibis*, 1880, p. 66; *Hume, Str. F.* 1879, p. 107; *Biddulph, Ibis*, 1881, p. 81; *Scully, t. c.* p. 575; *C. Swinh. Ibis*, 1882, p. 114; *Biddulph, t. c.* p. 282; *Salvin, Cat. Strickl. Coll.* p. 238 (1882); *Murray, Vertebr. Faun. Sind*, p. 188 (1884).

Euspiza brunneiceps, *Severtz. Turkest. Jevotn.* p. 64 (1878).

Adult male in summer plumage. Olive-yellow above, with mesial black streaks to the feathers of the mantle and upper back; lower back and rump yellow, with a tinge of chestnut on the latter; lesser wing-coverts olive-yellow; median, greater coverts, and secondaries

dark brown, broadly edged with pale isabelline-brown, white on the median coverts; bastard-wing, primary-coverts, and primaries dark brown, narrowly edged with isabelline; upper tail-coverts and tail dark brown, the former washed with yellow; the tail-feathers edged with isabelline-brown on both webs, whiter along the margin of the outer feather, which has a paler shade of brown down the middle; crown of head golden orange; the lores, feathers round the eye, ear-coverts, cheeks, and fore neck chestnutor bay; sides of neck yellow, washed with chestnut; rest of under surface of body bright yellow, tinged with chestnut on the vent; under wing-coverts, axillaries, and edge of wing also yellow; quills light brown below, ashy along the edge of the inner web: "bill bluish grey, dusky on the tip of the upper mandible; feet fleshy brown, darker on the toes; iris brown" (*A. O. Hume*). Total length 6·5 inches, culmen 0·55, wing 3·55, tail 2·85, tarsus 0·85.

The *adult male in winter plumage* is much duller than the summer plumage by reason of the ashy shade of brown which obscures the whole of the upper surface, including even the yellow rump; the chestnut head and throat are also overshaded with ashy, all the feathers being tipped with this colour; the whole of the yellow under surface of the body also washed over with ashy: "upper mandible greyish brown, darkest on the culmen, lower mandible greenish brown; legs and feet greyish brown; iris dark brown" (*E. A. Butler*). The summer plumage is evidently assumed through the wearing-off of the ashy tips to the feathers.

Adult female in summer plumage. Different from the male, with hardly any yellow in the plumage. Above light ashy brown, streaked with blackish shaft-markings, the head like the back, the hind neck more uniform; lower back and rump uniform ashy brown, the latter with a subterminal shade of yellow; wings and tail as in the male; lores and feathers round the eye ashy whitish; ear-coverts pale brown; cheeks and under surface of the body isabelline or pale sandy grey, with a slight wash of yellow, more pronounced on the abdomen and sides of the breast, and especially distinct on the under tail-coverts. Total length 6·3 inches, culmen 0·55, wing 3·15, tail 2·4, tarsus 0·75.

The *winter plumage of the adult female* only differs from the summer plumage in being more ruddy or sandy brown, especially on the throat and breast: "bill horny above, bluish fleshy below; legs and feet brown; iris dark brown" (*E. A. Butler*).

Young in winter plumage. Brown like the adult female, but much more rufescent, and nearly uniform above, only a few half-concealed black streaks being visible on the back; ear-coverts and sides of face pale rufous-brown, as also the edgings of the wing-coverts and secondaries: under surface of body pale isabelline, the lower throat, breast, and sides of body pale sandy rufous, with a tinge of yellow on the flanks and under tail-coverts.

Nestling. Browner than the winter plumage described above, more sandy buff, with very broad central black streaks to the dorsal plumage; the fore neck also minutely spotted with blackish.

Hab. Siberia and Central Asia, extending to the southward into Persia, Afghanistan, and the Indian peninsula.

a, b. Imm. sk.	Siberia.	Moscow Museum [P.].
c. Ad. st.	Altai Mountains.	Mr. Brandt.
d. Ad. sk.	Altai Mountains.	Mr. Brandt.
e, f. ♂ ♀ ad. sk.	Kirghis Steppes.	Purchased.
g, h, i, k. ♂ ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
l. Pull. sk.	Yarkand, June 27, 1875 (*Dr. J. Scully*).	Hume Coll.
m. ♀ ad. sk.	Near Abadeh, Persia.	Sir O. St. John [C.].
n. Juv. sk.	Fao, Persian Gulf, Sept. 1, 1884.	W. D. Cumming, Esq. [P.]
o. ♂ ad. sk.	Tirphul, W. Afghanistan, April 19, 1885.	Dr. Aitchison [C.].
p. ♂ ad. sk.	Shore, Kaltegai, May 3, 1885.	Dr. Aitchison [C.].
q. ♂ ad. sk.	Gulran, May 4, 1885.	Dr. Aitchison [C.].
r, s, t. ♂ ad. sk.	Candahar, April 1879 (*Sir O. St. John*).	Hume Coll.
u, v, w, x, y, z. ♂; *a'.* ♀ ad. sk.	Candahar (*Griffith*).	India Museum.
b'. ♂ ad. sk.	Chaman, Afghanistan, April 28.	Col. Swinhoe [P.].
c'. ♀ ad. sk.	Malkarez, Afghanistan, April 24.	Col. Swinhoe [P.].
d'. ♀ ad. sk.	Abdul Rahum, Afghanistan, April 23.	Col. Swinhoe [P.].
e'. ♂ ad.; *f'.* ♀ imm. sk.	Mundi Hissar, Afghanistan, April 22.	Col. Swinhoe [P.].
g'. ♂ ad. sk.	Kushdie Khan, May 2.	Col. Swinhoe [P.].
h'. ♂ ad. sk.	Peshawur.	Col. Way [P.].
i', k'. ♂ ad.; *l'.* ♀ ad. sk.	Deesa, Feb. 1876 (*E. A. Butler*).	Hume Coll.
m', n'. ♂ ♀ ad. sk.	Sambhur, March 22, 1873 (*R. M. Adam*).	Hume Coll.
o'. ♂ ad. sk.	Sambhur, April 5, 1873 (*R. M. A.*).	Hume Coll.
p'. ♂ ad. sk.	Sambhur.	Hume Coll.
q'. ♂ ad. sk.	Ajmere, Nov. 10, 1869.	Hume Coll.
r'. ♂ ad. sk.	Soojut, Jodhpur, April 3, 1868 (*A. O. H.*).	Hume Coll.
s'. ♂ ad. sk.	Sirsa district, Punjab, 1870.	Hume Coll.
t', u'. ♀ ad. sk.	Hissar, Punjab, Dec. 16, 1867 (*A. O. H.*).	Hume Coll.
v', w'. ♂ ♀ ad. sk.	Gurgaon district, March 23, 1868.	Hume Coll.
x'. Ad. sk.	Sultanpur, Gurgaon, March 24, 1881 (*W. N. Chill*).	Hume Coll.
y'. ♂ ad. sk.	Sultanpur, Gurgaon, Nov. 10, 1878 (*W. N. C.*).	Hume Coll.
z', a. ♂ ♀ ad. sk.	Sultanpur, Gurgaon, April (*W. N. C.*).	Hume Coll.
β, γ. ♂ ad. sk.	Delhi, March 23, 1868.	Hume Coll.
δ. ♀ ad. sk.	Delhi, April 6, 1876 (*C. T. Bingham*).	Hume Coll.

ϵ. ♀ imm. sk.	Jhansi, Punjab.	Pinwill Coll.
ζ, η. ♀ ad. et imm. sk.	N.W. India.	Pinwill Coll.
$\theta, \iota, \kappa, \lambda, \mu$. ♂ ad.; ν. ♀ ad.; ξ. ♂ imm. sk.	Etawah.	Hume Coll.
o, π. ♂ ad. sk.	Etawah, March 25, 1869.	Hume Coll.
ρ. ♂ ad. sk.	Etawah, Nov. 1869.	Hume Coll.
σ. ♂ ad. sk.	Etawah, Dec. 2, 1865.	Hume Coll.
τ. ♂; v, ϕ. ♀ ad. sk.	Etawah, April 1872 (*W. E. Brooks*).	Hume Coll.
χ, ψ. ♂ ♀ ad. sk.	Chuchowli, Jan. 11, 1866.	Hume Coll.
ω. ♂ ad. sk.	Allahabad.	Hume Coll.
a'. ♀ ad. sk.	Mogulserai, Jan. 11, 1875 (*W. E. Brooks*).	Hume Coll.
β'. ♂ ad. sk.	Mogulserai, Feb. 13, 1875 (*W. E. B.*).	Hume Coll.
γ'. ♂ ad. sk.	Oude, Dec. 1873.	Hume Coll.
δ', ϵ'. ♂ ad. sk.	Behar.	Hodgson Coll.
ζ'. ♂ ad. sk.	Central Provinces, Dec. 3, 1870.	Hume Coll.
η'. ♂ ad. sk.	Central Provinces, Feb. 1870.	Hume Coll.
θ'. ♂ ad. sk.	Saugor, Central Provinces, Nov. 16, 1869.	Hume Coll.
ι'. ♂ ad. sk.	Saugor.	Hume Coll.
κ'. ♂ ad. sk.	Lohardugga, Jan. 10, 1878.	Hume Coll.
λ'. ♂ ad. sk.	Mhow, Dec. 19.	Col. Swinhoe [P.].
μ', ν', ξ', o'. ♂ ad. sk.	Belgaum, Feb. 1880 (*E. A. Butler*).	Hume Coll.
π'. ♂ ad. sk.	Madras.	T. C. Jerdon, Esq. [P.].
ρ'. ♂ ad. sk.	Madras (*Jerdon*).	Gould Coll.
σ'. Skeleton.	India.	Purchased.

16. Emberiza aureola.

Emberiza aureola, *Pall. Reis. Russ. Reichs*, ii. p. 711 (1773); *Gm. Syst. Nat.* i. p. 875 (1788); *Pall. Zoogr. Rosso-Asiat.* ii. p. 52, tab. 50 (1811); *Temm. Man.* iii. p. 232 (1835); *Werner, Atlas, Granivores*, pls. 442, 443; *Gould, B. Eur.* iii. pl. 174 (1837); *Keys. u. Blas. Wirb. Eur.* p. xxxviii (1840); *Hodgs Icon. ined. in Brit. Mus., Passeres*, pl. 291. figs. 1–3 (n. 793); *id. in Gray's Zool. Misc.* p. 84 (1844); *Blyth, J. A. S. Beng.* xiii. p. 957 (1844); *Middend. Reis. Sibir., Zool.* p. 138, Taf. xiii. fig. 9 (1851); *Blyth, J. A. S. Beng.* xxiii. p. 732 (1854); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 153, cum tab. (1859); *Schrenck, Reis. Amurl.* p. 277 (1859); *Blas. in Naum. Vög. Deutschl.* xiii. pl. 381. figs. 1, 2 (1860); *Swinh. Ibis*, 1861, p. 334; *Blas. Ibis*, 1862, p. 71; *Swinh. Ibis*, 1863, p. 378; *Radde, Reis. Sibir., Vög.* p. 157, pl. 4. figs. *a–h* (1863); *Bree, B. Eur.* iii. p. 60 (1864); *Tristr. Ibis*, 1867, p. 367; *Borggr. Vogelf. Norddeutschl.* p. 71 (1869); *Fritsch, Vög. Eur.* tab. 20. fig. 1 (c. 1870); *Dresser, B. Eur.* iv. p. 223, pl. 218 (1871); *Lilford, Ibis*, 1875, p. 6; *Alst. & Harvie Brown, t. c.* p. 62; *Cordeaux, t. c.* p. 182; *Finsch, Ibis*, 1877, pp. 54, 55; *David & Oust. Ois. Chine*, p. 332 (1877); *Anders. Exped. Yun-nan, Aves*, p. 602 (1878); *Seebohm, Ibis*, 1878, p. 340;

Tiraud, Bull. Com. Agric. Cochin Chine (3), p. 132 (1879); *Finsch, Verh. z.-b. Wien*, xxix. p. 217 (1879); *Seeb. Ibis*, 1880, p. 188, 1882, p. 379; *Blakist. & Pryer, B. Japan*, p. 170 (1882); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90; *Oates, B. Brit. Burm.* i. p. 355 (1883); *Seeb. Ibis*, 1884, p. 266; *Blakist. Amend. List B. Japan*, pp. 17, 61 (1884).

Yellow-breasted Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 201 (1783).

Passerina aureola, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 6 (1817).

Passerina collaris, *Vieill. t. c.* p. 6 (1817).

Mirafra flavicollis, *McClell. P. Z. S.* 1839, p. 163; *Gray, Gen. B.* ii. p. 376 (1844).

Emberiza dolichonia, *Bp. Atti della sett. Adun. Sci. Ital.* 1845, p. 715 (*teste Salvad.*).

Emberiza selysii, *Verany, Atti de Congres Scient. Ital. Napoli*, 1848 (*teste Salvad.*).

Euspiza aureola, *Bp. Comp. List B. Eur. & N. Amer.* p. 36 (1838); *Gray, Gen. B.* ii. p. 376 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 108 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 129 (1849); *Bp. Consp.* i. p. 468 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 487 (1856); *Swinh. Ibis*, 1860, p. 62, 1861, pp. 45, 334; *Jerd. B. Ind.* ii. p. 380 (1863); *Blyth, Ibis*, 1867, p. 43; *Gray, Hand-l. B.* ii. p. 112, no. 7678 (1870); *Swinh. P. Z. S.* 1871, p. 387; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dybowski, J. f. O.* 1873, p. 90; *Hume, Str. F.* 1874, pp. 258, 481; *Oates, Str. F.* 1875, p. 159; *Blyth & Wald. B. Burm.* p. 94 (1875); *Godwin-Aust. J. A. S. Beng.* xlv. p. 83 (1876); *Tacz. Bull. Soc. Zool. France*, i. p. 178 (1876), iii. p. 137 (1878); *Hume & Davison, Str. F.* 1878, p. 409; *Hume, Str. F.* 1879, pp. 67, 107; *Scully, t. c.* p. 334; *Bingham, Str. F.* 1880, p. 193; *Bolau, J. f. O.* 1880, p. 127, 1881, p. 59; *Tacz. Bull. Soc. Zool. France*, vii. p. 393 (1882); *Stejneger, Proc. U. S. Nat. Mus.* 1883, p. 71; *Giglioli, Avif. Ital.* p. 46 (1885); *Salvad. Elench. Ucc. Ital.* p. 162 (1887).

Euspiza flavogularis, *Blyth, J. A. S. Beng.* xviii. pp. 86, 811 (1849); *id. Cat. B. Mus. As. Soc.* p. 129 (1849); *Bp. Consp.* i. p. 468 (1850).

Hypocentor aureolus, *Cab. Mus. Hein.* Th. i. p. 131 (1850); *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 244 (1885).

Euspiza flavocollaris, *Gray, Hand-l. B.* ii. p. 112, no. 7679 (1870).

Adult male in breeding-plumage. General colour above deep maroon, with blackish centres to the feathers of the mantle and back, and more or less indications of sandy margins (remains of winter plumage); least wing-coverts like the back, but washed with ashy; median series white, forming a wing-patch; greater coverts maroon, with blackish bases and broad white tips, forming a bar; bastard-wing and primary-coverts dusky brown, externally edged with whitish; quills brown, edged with ashy rufous, the inner secondaries maroon, with whitish margins, the primaries edged with yellowish white; upper tail-coverts brown, washed with maroon and edged with ashy; tail-feathers brown, edged with ashy brown, the outer feathers obliquely white, brown along the outer web and at the tip, with an oblique brown mark along the inner web; the white mark present but reduced in size on the penultimate feather; head uniform maroon; a broad frontal band, eyebrow, sides of face, ear-coverts, and upper throat black; lower throat

yellow, followed by a band of maroon across the fore neck; remainder of under surface of body yellow, the vent and under tail-coverts white; sides of body and flanks distinctly streaked with brown, the sides of the upper breast with chestnut; axillaries pale yellow; under wing-coverts dull white; quills dusky below, ashy whitish along the inner web: "upper mandible dark horny brown, lower one fleshy pink or very pale brown; legs and feet pale pinkish or horny brown; iris wood-brown" (*Davison*). Total length 6 inches, culmen 0·5, wing 2·85, tail 2·2, tarsus 0·75.

The *adult male in winter plumage* differs from the summer plumage in having the upper surface obscured by ashy margins to the feathers, in having an ashy-brown eyebrow, the ear-coverts ashy brown, with a black streak above and below, and more particularly in the colour of the under surface. The yellow is duller than in summer, and obscured by ashy margins to the feathers, which almost completely hide the maroon collar on the fore neck. The throat is likewise yellow instead of black, and this black throat is renewed in the spring by a complete moult, as is shown by two specimens in the Museum series. The remainder of the summer plumage appears to be gained by the wearing-off of the tips of the feathers instead of by a moult.

Adult female in breeding-plumage. Differs from the male in being brown above streaked with black, narrowly on the head and broadly on the mantle and back; the lower back, rump, and upper tail-coverts pale chestnut, centred with black; the head paler brown in the centre, like the hind neck, the sides of the crown darker brown; lesser wing-coverts ashy; median wing-coverts blackish, tipped with white, forming a wing-bar; bastard-wing, primary-coverts, and quills dark brown, edged with ashy brown, whiter on the primaries; the greater coverts and secondaries dark brown, externally rufous-brown, the coverts whitish at their ends; tail as in the male, but the white on the two outer feathers not so extended; lores, eyebrow, and feathers round the eye isabelline, the ear-coverts pale brown, with a distinct streak of black along their lower margin; cheeks and throat ashy white, with a dull brown malar streak; lower throat and breast yellow, clearer on the lower breast and abdomen; lower abdomen and under tail-coverts dull white, the latter with longitudinal central streaks of dark brown; sides of body and flanks pale brownish, broadly streaked with blackish brown; axillaries pale brown; under wing-coverts whitish; quills dusky below, ashy grey along the inner web. Total length 5·5 inches, culmen 0·45, wing 2·85, tail 1·15, tarsus 0·8.

Dr. Finsch procured a specimen near Barnaul on the 21st of July, which he has marked as a female, and which only differs from the male in being brown streaked with black above, and in the paler colour of the underparts. It has a chestnut head and præpectoral collar, as in the male, and even shows the black throat, the latter, however, much obscured by ashy feathers. If this is indeed a female and not a male of the previous year in its first breeding-dress, then it must be a case of assumption of male plumage, or else

it may prove that very old females make considerable approach to the full plumage of the adult male.

Young females in winter plumage closely resemble the old females, but are very thickly streaked with black on the head, and have often a deep tinge of saffron-yellow on the throat and fore neck. Young males generally show some maroon colour on the head and upper parts, and the collar on the fore neck can also be traced.

Young birds have the bill dull flesh-coloured, above brownish grey, feet pale brownish grey, iris dark brown, according to Dr. Stejneger.

Hab. Northern Europe and Siberia, Northern China, wintering in the Burmese countries and as far south as Johore in the Malayan peninsula.

a. ♂ ad. sk.	Archangel.	Salvin-Godman Coll.
b. ♀ ad. sk.	Onega River, July 10 (*W. Meves*).	Salvin-Godman Coll.
c. [♀] ad. sk.	Before Barnaul, June 21 (*O. Finsch*).	Geogr. Soc. Bremen.
d, *e*. ♂ ♂ ad. sk.	Altai Mountains.	Mr. Brandt.
f. ♂ ad. sk.	Kalgan, "just within the outer wall of China, 2000 feet."	Gould Coll.
g. ♂ ad. sk.	China.	J.R.Reeves,Esq.[P.].
h, *i*. ♂ ad.; *k*, *l*. ♀ ad. sk.	Nepal.	Hodgson Coll.
m, *n*, *o*, *p*. ♂ ad.; *q*, *r*. ♀ ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
s, *t*. ♂ ad. et imm.; *u*. ♀ ad. sk.	Nepal Valley, Feb. 1878 (*Dr. J. Scully*).	Hume Coll.
v. ♂ imm. sk.	Native Sikhim, Oct. 1872 (*L. Mandelli*).	Hume Coll.
w. ♂ ad. sk.	Dhollah, Assam, April 19, 1887 (*J. Cockburn*).	Hume Coll.
x. ♂ ad. sk.	Dhollah, Assam, May 1, 1877 (*J. Cockburn*).	Hume Coll.
y, *z*. ♂ imm. sk.	Assam (*McClelland*).	India Mus. (Types of *Mirafra flavicollis*.)
a'. ♀ imm. sk.	Joonkotollee, Dibrughur, Assam, Oct. 25, 1880 (*J. R. Cripps*).	Hume Coll.
b'. ♀ ad. sk.	Cachar, Jan. 27, 1881 (*A. O. H.*).	Hume Coll.
c'–*q'*. ♂ ad.; *r'*–*β*. ♀ ad.; *γ*, *δ*. ♂ imm. sk.	Manipur, Feb. 1881 (*A. O. H.*).	Hume Coll.
ϵ–*τ*. ♂ ad. sk.	Manipur, March 1881 (*A. O. H.*).	Hume Coll.
υ–*κ'*. ♀ ad. sk.	Manipur, March 1881 (*A. O. H.*).	Hume Coll.
λ', *μ'*, *ν'*. ♂ imm. sk.	Manipur, March 1881 (*A. O. H.*).	Hume Coll.
ξ. ♂ ad. sk.	Kokshin-Koolel, Manipur, April 6, 1881 (*A. O. H.*).	Hume Coll.

o'–ρ'. ♂ ♀ ad. sk.	Phalel, Manipur, April 9, 1881 (*A. O. H.*).	Hume Coll.
σ', τ'. [♂ ♀] ad. sk.	Bhamo, Feb. 3.	Dr. J. Anderson [C.].
υ', φ'. ♂ sk.	Wau, Pegu, April.	Oates Coll.
χ'. ♀ ad. sk.	Wau, Pegu, April 24.	Oates Coll.
ψ'. ♂ juv. sk.	Near Pegu, Feb.	Oates Coll.
ω'. ♀ ad. sk.	Pegu, April 26.	Oates Coll.
a. ♂ ad. sk.	Pegu, Nov. 18.	Oates Coll.
b. ♂ ad. sk.	Arakan.	Purchased.
c, d. ♂ imm. sk.	Kedai Keglay, 18 miles from Thatone, Tenasserim, Dec. 16, 1876 (*W. Davison*).	Hume Coll.
e, f. ♂ ad.; *g*. ♂ imm. sk.	Htain Ben, Thatone, Feb. 9, 1878 (*W. D.*).	Hume Coll.
h. ♂ ad.; *i*. ♂ imm. sk.	Thatone, Jan. 10, 1878 (*W. D.*).	Hume Coll.
k. ♀ ad. sk.	Thatone, Nov. 29, 1877 (*W. D.*).	Hume Coll.
l, m. ♂ ad. et juv. sk.	Thatone, Dec. 1877 (*W. D.*).	Hume Coll.
n. ♂ ad. sk.	Thatone, March 11, 1877 (*W. D.*).	Hume Coll.
o. ♀ ad. sk.	Wimpong, 15 miles from Thatone, Jan. 2, 1871 (*W. D.*).	Hume Coll.
p. ♂ imm. sk.	Wimpong, Dec. 28, 1876 (*W. D.*).	Hume Coll.
q. ♀ imm. sk.	Kanee, Houngthraw River, March 7, 1877 (*W. D.*).	Hume Coll.
r, s, t. ♂ ad.; *u*. ♂ juv. sk.	Pabyouk, March 12, 1874 (*W. D.*).	Hume Coll.
v. ♂ ad.; *w, x*. ♂ ♀ juv. sk.	Moulmein, Dec. 1878 (*W. D.*).	Hume Coll.
y. ♂ imm. sk.	Moulmein, Jan. 2, 1879 (*W. D.*).	Hume Coll.
z. ♀ ad. sk.	Moulmein, Feb. 22, 1878 (*W. D.*).	Hume Coll.
a', b', c, d', e'. ♂, *f', g', h'*. ♀ ad. sk.	Tavoy, March 1877 (*W. D.*).	Hume Coll.
i', k'. ♂ imm. sk.	Tavoy, March 1877 (*W. D.*).	Hume Coll.
l', m', n'. ♂ ad.; *o', p', q', r', s', t'*. ♀ ad. sk.	Tavoy, April 1877 (*W. D.*).	Hume Coll.
u'. ♂ imm. sk.	Zadawoon, Mergui, Nov. 21, 1876 (*W. D.*).	Hume Coll.
v'. ♂ ad. sk.	Pakchan, Jan. 22, 1875 (*W. D.*).	Hume Coll.
w'. ♂ ad. sk.	Pahpoon, Jan. 21, 1874 (*W. D.*).	Hume Coll.
x'. ♀ ad. sk.	Johore, Aug. 18, 1875 (*W. D.*).	Hume Coll.
y'. ♀ imm. sk.	Camorta, Nicobars, March 5, 1873 (*W. D.*).	Hume Coll.

17. Emberiza rutila.

Emberiza rutila, *Pall. Reis. Russ. Reichs*, iii. p. 698 (1776); *Gm. Syst. Nat.* i. p. 872 (1788); *Pall. Zoogr. Rosso-Asiat.* ii. p. 53 (1811); *Gray, Gen. B.* ii. p. 377 (1844); *Temm. & Schl. Faun. Jap., Aves*, pl. 56 B (1850); *Midd. Sibir. Reis.* ii. p. 141 (1851); *Schrenck, Amur. Reis., Zool.* p. 280 (1859); *Swinh. Ibis*, 1861, pp. 334, 410; *id. P. Z. S.* 1862, p. 318; *Radde, Reis. Sibir., Vög.* p. 168 (1863); *Blyth & Wald. B. Burm.* p. 95 (1875); *Wardlaw Ramsay, Ibis*, 1877, p. 462; *Taez. Bull. Soc. Zool. France*, iii. p. 139 (1878); *Tiraud, Bull. Com. Agric. Cochin Chine*, (3) i. p. 132 (1879); *Blakist. & Pryer, B. Japan*, p. 171 (1882); *Oates, B. Brit. Burm.* i. p. 354 (1883); *Blakist. Amended List B. Japan*, p. 30 (1884).

Euspiza rutila, *Bp. Consp.* i. p. 469 (1850); *Swinh. P. Z. S.* 1863, p. 300; *Dybowski, J. f. O.* 1868, p. 335; *Swinh. P. Z. S.* 1871, p. 387; *Taez. J. f. O.* 1873, p. 90, 1874, p. 335; *id. Bull. Soc. Zool. France*, i. p. 178 (1876); *David & Oust. Ois. Chine*, p. 331 (1877); *Hume & Davison, Str. F.* 1878, p. 408; *Hume, Str. F.* 1879, p. 107.

Citrinella rutila, *Gray, Hand-l. B.* ii. p. 113, no. 7696 (1869); *Hume, Str. F.* 1875, p. 117.

Adult male. General colour above deep bay or chestnut, entirely uniform, but a little lighter towards the rump and upper tail-coverts; scapulars and wing-coverts like the back, the latter with obsolete fringes of olive-grey at the ends; bastard-wing blackish; primary-coverts dark brown, margined with dull olive; quills blackish brown, edged with light brown, the primaries with ashy, the inner secondaries externally chestnut; tail-feathers dark brown, edged with olive, the two outer ones with a small whitish mark at the end of the outer web; sides of face, throat, and fore neck chestnut like the back; remainder of under surface of body clear sulphur-yellow, including the thighs and under tail-coverts; sides of body and flanks olive-greenish, with broad streaks of dusky blackish; axillaries and under wing-coverts white, washed with pale yellow, with dusky bases; quills dusky below, ashy along the inner web: "bill brown; feet grey; iris brownish rufous" (*David*). Total length 5 inches, culmen 0·45, wing 2·95, tail 2·25, tarsus 0·7.

In *winter plumage* the chestnut feathers of the back and throat have ashy margins, which are shed on the approach of the breeding-season.

The *younger males in winter plumage* may be told by the ashy colour of the mantle and back being much more developed, these parts being further mottled by subterminal spots of black.

Adult female. Different from the male. Brown above, broadly streaked with black on the mantle and back, the head like the back and similarly streaked; hind neck more uniform and less distinctly streaked with blackish; lower back and rump chestnut; upper tail-coverts pale chestnut, with ashy margins and dusky centres; wing-coverts blackish brown, edged with ashy olive, yellowish white towards the end of the feathers; bastard-wing, primary-coverts, and quills dark brown, edged with pale brown, slightly rufescent

on the margins of the secondaries; tail as in the male; lores, feathers round the eye, and a faint eyebrow isabelline; ear-coverts pale ashy brown, with a streak of black along the upper margin; cheeks and throat pale ochreous buff, separated from each other by a malar line of black; remainder of under surface of body pale sulphur-yellow, with a few dusky streaks on the chest; the sides of the body and flanks ashy olive, broadly streaked with blackish brown. Total length 4·5 inches, culmen 0·45, wing 2·65, tail 1·85, tarsus 0·7.

Young. Differs from the old female, which it generally resembles, by its striped under surface, which is paler yellow than in the adults, narrowly streaked with black on the throat, breast, and sides of the body; upper surface rufous-brown, streaked with black, the lower back and rump more rufous than the back and streaked with black. In general appearance the young bird resembles that of *E. pusilla*, with which Mr. Seebohm identified the specimen described; but it may be recognized by its yellow under surface.

Hab. Eastern Siberia and N. China; doubtfully recorded from Japan (*cf.* Blakiston, *l. c.**); winters in Southern China, Cochin China, Indo-Burmese countries, and South-eastern Himalayas.

a. ♂ ad.; *b.* ♂ sk.	Amoor-Land.	Purchased.
c. ♂ ad. sk.	China (*R. Swinhoe*).	Gould Collection.
d. Juv. sk.	"Ship," Oct. 15*.	F. Ringer, Esq. [P.].
e. ♀ juv. sk.	Native Sikhim, March 1873 (*L. Mandelli*).	Hume Coll.
f. ♂ ad. sk.	Goki, British Sikhim, March 1871 (*L. M.*).	Hume Coll.
g. ♂ ad. sk.	Taidah, British Sikhim, Apr. 1871 (*L. M.*).	Hume Coll.
h. ♂ imm. sk.	Bhootan Dooars, Jan. 1876 (*L. M.*).	Hume Coll.
i, k, l, m. ♂; *n, o, p, q.* ♂ imm. sk.	Wimpong, 15 miles from Thatone, Tenasserim, Dec. 1876 (*W. Davison*).	Hume Coll.
r, s, t, u, v. ♂ ad.; *w, x.* ♂ ♀ imm. sk.	Wimpong, Jan. 1877 (*W. D.*).	Hume Coll.
y. ♀ ad. sk.	Above Kyouknyat, Salween district, Jan. 31, 1874 (*W. D.*).	Hume Coll.

18. Emberiza citrinella.

The Yellow Hammer, *Albin, Nat. H. Birds*, i. p. 63, pl. 66 (1738).
Le Bruant, *Briss. Orn.* iii. p. 258 (1760).
Emberiza citrinella, *Linn. Syst. Nat.* i. p. 309 (1766); *Pall. Zoogr. Rosso-Asiat.* ii. p. 36 (1811); *Koch, Syst. baier. Zool.* p. 210 (1816); *Temm. Man. d'Orn.* p. 304 (1820); *Naum. Vög. Deutschl.*

* I think there can be no doubt as to the identity of the specimen procured by Mr. Ringer; but it was apparently caught on board ship.

iv. pl. 102. figs. 1, 2 (1824); *Roux, Orn. Provenç.* pl. 104 (1825); *Werner, Atlas, Granivores*, pl. 21 (1827); *Brehm, Vög. Deutschl.* p. 294 (1831); *Ménetr. Cat. Rais. Cauc.* p. 40 (1832); *Gould, B. Eur.* iii. pl. 173 (1837); *Macgill. Br. B.* i. p. 445 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 36 (1838); *Crespon, Orn. Gard*, p. 214 (1840); *Keys. u. Blas. Wirb. Eur.* p. 155 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 172 (1840); *Selys-Longch. Faun. Belge*, p. 82 (1842); *Yarr. Brit. B.* i. p. 443 (1843); *Gray, Gen. B.* ii. p. 377 (1844); *Thomps. B. Irel.* i. p. 243 (1849); *Bp. Consp.* i. p. 465 (1850); *Cab. Mus. Hein.* Th. i. p. 128 (1850); *Kjærb. Orn. Dan.* pl. 25. fig. 1 (1852); *Schl. Vog. Nederl.* pl. 154 (1854); *Hewits. Eggs Brit. B.* p. 188, pl. 47. fig. 2 (1856); *Sundev. Svensk. Fogl.* pl. 6. fig. 4 (c. 1858); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 156 (1859); *Schl. Dier. Nederl. Vog.* pl. 15. figs. 2, 3 (1861); *F. & P. Godm. Ibis*, 1861, p. 84; *Gray, List Brit. B.* p. 103 (1863); *Radde, Reis. Sibir., Vög.* p. 161 (1863); *Giglioli, Ibis*, 1865, p. 57; *Morc, t. c.* p. 125; *Degl. et Gerbe, Orn. Eur.* i. p. 310 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 170 (1867); *Borggr. Vogelf. Norddeutschl.* p. 72 (1869); *Doderl. Avif. Sicil.* p. 87 (1869); *Droste, Vogelw. Borkum*, p. 109 (1869); *Wright, Ibis*, 1869, p. 256; *Elwes & Buckley, Ibis*, 1870, p. 193; *Hutton, t. c.* p. 397; *Fritsch, Vög. Eur.* tab. 17. fig. 7 (c. 1870); *Gould, B. Gt. Br.* iii. pl. 22 (c. 1870); *Salvad. Faun. Ital., Uce.* p. 137 (1871); *Saunders, Ibis*, 1871, p. 217; *R. Gray, B. West Scotl.* p. 130 (1871); *Dresser, B. Eur.* iv. p. 171, pl. 209 (1871); *Harting, Handb. Brit. B.* p. 26 (1872); *F. Godm. Ibis*, 1872, p. 209; *Severtz. Turkest. Jevotn.* p. 64 1873; *Alston & Harvie Brown, Ibis*, 1873, p. 63; *Irby, B. Gibr.* p. 225 (1875); *Newton, ed. Yarr. Brit. B.* ii. p. 43 (1876); *Tacz. Bull. Soc. Zool. France*, i. p. 177 (1876); *Dresser, Ibis*, 1876, p. 248; *Danf. & Harvie Brown, t. c.* p. 312; *Fallon, Ois. Belg.* p. 86 (1872); *Blanf. East. Persia*, ii. p. 257 (1876); *Seebohm & Harvie Brown, Ibis*, 1876, p. 116; *Rowley, Orn. Misc.* ii. p. 73, pl. xlvi. fig. 1 (1876); *Finsch, Ibis*, 1877, pp. 49, 64; *Danf. Ibis*, 1878, p. 22; *Irby, Ibis*, 1879, p. 345; *Bogd. B. Cauc.* p. 70 (1879); *Finsch, Verh. z.-b. Gesellsch. Wien*, xxix. p. 215 (1879); *Seebohm, Ibis*, 1882, pp. 217, 379; *Finsch, t. c.* p. 394; *Seebohm, Ibis*, 1883, p. 11; *Irby, t. c.* p. 184; *B. O. U. List Brit. B.* p. 60 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90; *Clarke, Ibis*, 1884, p. 143; *Saunders, t. c.* p. 376; *Seebohm, Hist. Brit. B.* ii. p. 160 (1884); *Radde, Orn. Cauc.* p. 191 (1884); *Giglioli, Avif. Ital.* p. 47 (1885); *Salvad. Elench. Uce. Ital.* p. 163 (1887).

Le Bruant de France, *Daubent. Pl. Enl.* v. pl. 30. fig. 1; *Montb. Hist. Nat. Ois.* iv. p. 340 (1778).

Yellow Bunting, *Lath. Gen. Syn.* ii. pt. 1, p. 170 (1783).

Emberiza cirlus (*nec L.*), *Roux, Orn. Prov.* pl. 107 (1825).

Emberiza sylvestris, *Brehm, Vög. Deutschl.* p. 294 (1831).

Emberiza major, etc., *Brehm, Naum.* 1855, p. 278.

Citrinella citrinella, *Gray, Hand-l. B.* ii. p. 113, no. 7683 (1870).

Adult male in winter plumage. General colour above fulvous-brown, rather ashy on the margins of the feathers, which are broadly streaked with black centres, and are slightly tinged with olive-yellow; lower back, rump, and upper tail-coverts vinous chestnut, the former slightly streaked with blackish, the latter distinctly margined with ashy; lesser wing-coverts more rufous than the back, with longitudinal black centres; the median series black, broadly

edged with rufous and terminally margined with ashy; greater coverts black, broadly edged with fulvous-brown, more rufous on the inner ones; bastard-wing, primary-coverts, and quills dark sepia-brown, narrowly edged with ashy olive, becoming pale yellow towards the ends of the primaries, the first of which is margined entirely with yellowish white; the secondaries edged with fulvous-brown, the innermost rufous on the outer web and at the tip; tail-feathers dark brown, edged with ashy fulvous, somewhat rufescent on the centre feathers, and tinged with yellow on the outer ones; the two outer feathers with an elongated wedge-shaped mass of white on the inner web, much reduced on the penultimate feather; crown of head olive-greenish, with yellow bases to the feathers, which are also streaked with black near the ends; the sides of the crown dull olive-greenish, streaked with black; hind neck and sides of neck dull olive-greenish; lores bright yellow, as well as the feathers over the eye, both more or less concealed by olive-greenish; cheeks and sides of face dull yellow, overshaded with olive; a line along the upper and a second line along the lower edge of the ear-coverts dusky black; entire throat yellow, with a few triangular spots of dull olive and a dusky patch at the lower end of the malar line; fore neck olive-greenish, this colour extending on to the sides of the neck; breast and abdomen yellow; the sides of the breast and flanks as well as the under tail-coverts dull yellow, with pale chestnut or ferruginous centres, the flanks also mesially streaked with black; thighs dull yellow; axillaries and under wing-coverts pale yellow, with ashy bases; quills dull ashy below, paler ashy along the inner web. Total length 7 inches, culmen 0·45, wing 3·6, tail 3, tarsus 0·75.

Adult male in summer plumage. Much more brilliantly coloured than in winter, and without the ashy or olive shading. The summer dress is acquired by the wearing away and abrasion of the tips to the feathers; hence all the colours become greatly intensified. The back is clearer brown, with strongly-marked black centres to the feathers; the lower back and rump deeper chestnut, without any ashy margins; the wing-coverts and secondaries have more decided chestnut on the margins, and the yellow edgings to the primaries are only slightly marked; the crown of the head and nape are canary-yellow, with a streak of greenish black across the forehead and along the sides of the crown, widening towards the occiput; this is succeeded by a distinct yellow eyebrow; feathers below the eye and ear-coverts yellow, with a broad band of greenish black along the lower and hinder edge of the ear-coverts; sides of neck pure yellow, as also the cheeks and throat, with a distinct moustachial line of chestnut; the chest greenish or ashy olive; breast and sides of the body uniform chestnut; the flanks somewhat edged with yellow and distinctly streaked with black; lower breast and abdomen yellow; under tail-coverts yellow, with chestnut centres.

It is seldom that males, even when in full summer plumage, are found as brightly coloured as the one described above, which is an extreme example. There is generally a good deal of striping on the

head, and the chestnut on the sides of the breast is not uniform, but is mottled with yellow margins to the feathers. There is considerable variation in the colouring of the adult males, especially as regards their facial markings. Some show little or no sign of the chestnut line on the cheeks, while in others it is strongly developed, and in one specimen from Hampshire, in the Gould collection, it is so broad as to occupy nearly the whole of the cheeks. The time of year, too, for the commencement of the change to spring plumage is uncertain. Capt. Shelley shot a male on the 23rd of November already far advanced towards the complete yellow head; whereas other males killed in April show very little sign of the approaching breeding-dress.

Adult female in summer plumage. Differs from the male in the less amount of yellow on the head and in the uniform dusky ear-coverts; the crown, even in full breeding-plumage, is dull ashy olive-brown, closely streaked with black, and showing yellow bases to the feathers when disturbed; the head, however, never becomes yellow; lores dull yellowish ashy; cheeks, throat, and underparts pale yellowish, thickly marked on the cheeks with triangular little black spots, taking the form of longitudinal stripes on the chest, less distinct on the throat, which is ashy olive, and very distinct on the flanks, which are rufous-brown. Total length 6·3 inches, culmen 0·4, wing 3·2, tail 2·65, tarsus 0·75.

Young in first winter plumage. Similar to the old female in winter, but more yellow below and more distinctly streaked, especially on the throat and flanks; all the streaks on the upper surface also very strongly pronounced.

Specimens from Western Siberia and Persia have the wing-coverts rather whiter at the ends than ordinary European examples.

Hab. Europe generally, extending into Western Siberia.

a. ♂ ad. var. sk.	St. Davids, Pembrokeshire, Sept. 9.	Dr. Günther [P.].
b. ♂ ad. sk.	Delamere, Cheshire, July 14 (*F. Nicholson*).	R. B. Sharpe, Esq. [P.].
c. ♀ ad. sk.	Cambridge, April 4 (*O. S.*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Cambridgeshire (*J. Baker*).	Salvin-Godman Coll.
e, f. ♂ ad.; *g, h.* Pull. st.	Cambridgeshire.	Mr. J. Baker [C.].
i, k. ♂ ♀ ad. st.	Norfolk, June.	Lord Walsingham [P.].
l. ♂ ad.; *m, n.* Pull. st.	Saffron Walden, Essex.	J. Clarke, Esq. [P.].
o. ♂ ad. st.	Leicestershire.	Theodore Walker, Esq.
p, q. ♂ ♀ ad. sk.	Oxford, Feb. 4, 1878.	R. B. Sharpe, Esq. [P.].
r. ♂ ad. sk.	Cookham, Berks.	Gould Coll.
s, t. ♂ ad. sk.	Cookham, Feb. 1874.	R. B. Sharpe, Esq. [P.].
u, v. ♂ ad. sk.	Cookham, Jan. 24, 1879.	R. B. Sharpe, Esq. [P.].
w. ♂ ad. st.	Epping.	H. Doubleday, Esq. [P.].
x, y. ♂ ad. sk.	Colgate, Sussex, Dec. 23.	R. B. Sharpe, Esq. [P.].
z, a'. ♂ ad. sk.	Lancing, Sussex, April 1.	R. B. Sharpe, Esq. [P.].
b'. ♂ ad. sk.	Lancing, March 28.	R. B. Sharpe, Esq. [P.].
c', d', e'. ♂ ad. et imm. sk.	Brighton, Sussex, Oct.	R. B. Sharpe, Esq. [P.].

f', *g'*. ♂ ad.; *h'*. ♀ imm. sk.	Brighton, Nov.	R. B. Sharpe, Esq. [P.].
i', *k'*. ♂ ♀ ad. sk.	Surrey, Jan.	Salvin-Godman Coll.
l'. ♂ ad. sk.	Alton, Hants.	Gould Coll.
m'. ♂ ad.; *n'*. ♀ juv. sk.	Avington, Hants, Feb. 12.	R. B. Sharpe, Esq. [P.].
o', *p'*. ♂ ad. sk.	Avington, May 11.	R. B. Sharpe, Esq. [P.].
q', *r'*. ♂ ♀ ad. sk.	Avington, Nov. 23.	R. B. Sharpe, Esq. [P.].
s'. ♀ ad. sk.	Cheltenham, Gloucestershire, Feb.	J. E. Harting, Esq. [P.].
t', *u'*. ♂ ♀ ad. sk.	Wiltshire.	Montagu Coll.
v'. ♂ ad. var. sk.	Wiltshire.	Montagu Coll.
w'. ♂ ad. sk.	Axmouth, Devonshire, Dec. 12 (*H. Swaysland*).	R. B. Sharpe, Esq. [P.].
x', *y'*. ♂ ad. sk.	Moscow, April 20.	Dr. Lenz.
z'. ♂ ad. sk.	Ust Zylma, Petchora River, May 17.	Col. Feilden and J. A. Harvie Brown, Esq. [P.].
a. ♂ ad. sk.	Stockholm, Dec. 14 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
β. ♀ ad. sk.	S. Norway, May (*J. Baker*).	Salvin-Godman Coll.
γ. ♂ ad. sk.	Sarpsborg, Norway, June (*J. Baker*).	Salvin-Godman Coll.
δ. ♀ ad. sk.	Borregaard, S. Norway, July (*J. Baker*).	Salvin-Godman Coll.
ε. ♂ ad. sk.	Christiania Fjord, Norway, July.	Gould Coll.
ζ, *η*. ♂ ♀ ad. sk.	Denmark, Jan. 7, 1871 (*A. Benzon*).	Hume Coll.
θ. ♂ ad. sk.	Denmark, May 19, 1869 (*A. Benzon*).	Hume Coll.
ι. ♀ ad. sk.	Belgium, Dec. 10.	Brussels Museum [P.].
κ. ♂ ad. sk.	Belgium, May 7.	Brussels Museum [P.].
λ. ♂ ad. sk.	Havre, W. France, June 4 (*V. Pluche*).	Edward Hargitt, Esq. [P.].
μ. ♂ ad. sk.	Havre, Nov. 1 (*V. Pluche*).	Edward Hargitt, Esq. [P.].
ν, *ξ*. ♂ ♀ ad. sk.	Seine-et-Oise (*Petit*).	Edward Hargitt, Esq. [P.].
o. ♂ imm. sk.	Italy.	Gould Coll.
π. ♂ ad. sk.	Erzeroum (*Dickson and Ross*).	Gould Coll.
ρ, *σ*. ♂ ♀ ad. sk.	Persia.	Purchased.
τ. ♀ imm. sk.	Nisamkaja, River Ob, Sept. 18 (*Dr. Finsch*).	Geogr. Soc. Bremen.
υ, *φ*. Skeletons.	England.	Purchased.
χ, *ψ*. Skeletons.	England.	Purchased.
ω, *a'*, *β'*, *γ'*, *δ'*. Skulls.	S. Germany.	Dr. Günther [P.].

19. Emberiza sulphurata.

Emberiza sulphurata, *Temm. & Schl. Faun. Jap., Aves*, p. 100, pl. 60 (1850); *Bp. Consp.* i. p. 464 (1850); *Swinh. Ibis*, 1861, p. 334, 1863, p. 378; *David & Oust. Ois. Chine*, p. 330 (1877); *Blakist. & Pryer, B. Japan*, p. 171 (1882); *Blakist. Amended List B. Jap.* p. 17 (1884).

Euspiza sulphurata, *Swinh. Ibis*, 1860, p. 359, 1861, p. 46; *id. P. Z. S.* 1863, p. 378; *Gray, Hand-l. B.* ii. p. 112, no. 7680 (1870); *Swinh. P. Z. S.* 1871, p. 388; *id. Ibis*, 1875, p. 451.

Adult male in breeding-plumage. General colour greenish grey washed with pale yellow; the head and mantle paler and more sulphur-yellow, the latter with broad mesial streaks of black; the scapulars like the mantle; the rump and lower back uniform and more distinctly ashy grey; upper tail-coverts ashy with yellowish edges; lesser wing-coverts ashy with a yellowish tinge; median and greater series blackish, edged with ashy and tipped with yellowish white, the greater coverts slightly rufescent on the outer margins; bastard-wing, primary-coverts, and quills blackish, edged with ashy olive, the secondaries externally rufescent, the innermost with whitish margins, so as to resemble the inner greater coverts; centre tail-feathers light brown, the others blackish, the outer one for the most part white, excepting a longitudinal mark along the end of the outer web and an oblique basal mark on the inner web; penultimate feather with the white much reduced and forming a large wedge-shaped mark on the inner web; the third feather with only a small white mark near the end of the inner web; ear-coverts greenish grey like the hind neck; lores, feathers in front of the eye, and a spot at base of chin dusky blackish; feathers below the eye, cheeks, and under surface of body sulphur-yellow, paler on the lower breast and abdomen, and still lighter on the under tail-coverts, which are whitish tinged with yellow; sides of breast and flanks ashy olive, the latter streaked with black; axillaries and under wing-coverts white, washed with pale yellow; quills ashy below, whitish along the edge of the inner web. Total length 5·25 inches, culmen 0·4, wing 2·85, tail 2·25, tarsus 0·7.

Considerable difference exists in the full-plumaged males with regard to the amount and intensity of the black stripes on the back. In *winter* the adult male appears to be always more broadly streaked with black on the back, the black centres becoming attenuated during the breeding-season; the mantle is also washed with rufous like the inner secondaries.

The *adult female in breeding-plumage* differs but little from the male, being duller in colour and rather browner on the mantle, which is very broadly streaked with black; it is further distinguished by the absence of the black lores and chin-spot. Total length 4·75 inches, culmen 0·45, wing 2·75, tail 2·1, tarsus 0·7.

Young birds in winter plumage. Only differ from the plumage of the adult female in being rather more olive-brown, with the rufescent edges to the feathers of the mantle and inner secondaries broad and strongly pronounced; lower back and rump uniform ashy olive; the under surface of the body is clear yellow, with a tinge of saffron-colour on the throat and chest.

Hab. Northern and Central China; Japan.

a, b. ♂ ad. sk.	Japan.	H. Seebohm, Esq. [P.].
c. ♂ imm. sk.	Amoy, April (*R. Swinhoe*).	H. Seebohm, Esq. [P.].

d. ♂ ad. sk.	Amoy, China, April.	Consul Swinhoe [C.].
e. ♀ ad. sk.	Amoy, China, May.	Consul Swinhoe [C.].
f. ♀ juv. sk.	Amoy, April (*R. Swinhoe*).	Gould Coll.
g. ♀ ad. sk.	Amoy, April (*R. S.*).	Salvin-Godman Coll.
h. Ad. sk.	Amoy, April (*R. S.*).	Hume Coll.
i. ♀ jun. sk.	Formosa, Dec.	Consul Swinhoe [C.].

20. Emberiza personata.

Emberiza personata, *Temm. Pl. Col.* iii. pl. 580 (1835); *Gray, Gen. B.* ii. p. 377 (1844); *Temm. & Schl. Faun. Jap., Aves*, pl. 59 B. (1850); *Bp. Consp.* i. p. 465 (1850); *Horsf. & Moore, Cat. E. I. Co. Mus.* ii. p. 484 (1856); *Swinh. Ibis*, 1861, pp. 45, 334, 1862, p. 258, 1872, p. 80, 1874, p. 161; *Tacz. Bull. Soc. Zool. France*, i. p. 176 (1876); *Blakist. & Pryer, Ibis*, 1878, p. 243; *id. B. Japan*, p. 170 (1882); *Seebohm, Ibis*, 1884, p. 182; *Blakist. Amended List B. Japan*, pp. 17, 61 (1884).
Emberiza sulphurata, *Whitely, Ibis*, 1867, p. 203.
Citrinella personata, *Gray, Hand-l. B.* ii. p. 113, no. 7689 (1870).
Euspiza personata, *Swinh. Ibis*, 1866, p. 62.

Adult male. General colour above rufous-brown mesially streaked with black, the feathers of the mantle with pale ashy-fulvous markings; the lower back and rump olive-brown, slightly mottled with dusky centres to the feathers; lesser wing-coverts uniform olive-brown; median and greater coverts dusky brown, edged with pale olive-brown, slightly rufescent, and tipped with dull white, rather broader on median series; bastard-wing and primary-coverts dusky brown, washed externally with ashy; quills dusky brown, externally edged with rufous, the primaries with pale olive, the innermost secondaries externally ashy whitish; upper tail-coverts and centre tail-feathers light brown, edged with sandy buff; rest of tail-feathers blackish, edged with sandy buff; penultimate feather with a wedge-shaped mark of white, larger on the outermost one, which has the outermost web white towards the base; crown of head, occiput, nape, and hind neck dark olive-greenish, slightly streaked with black mesial lines, some of the nape-feathers on the sides of hinder crown tipped with reddish brown; lores, eyebrow, feathers round eye, fore part of cheeks, and spot on chin black; ear-coverts ashy grey with a slight yellow tinge, and surmounted by a slight streak of sulphur-yellow along the side of the hinder crown; cheeks sulphur-yellow, separated from the throat by a malar line of dusky spots; throat and fore neck sulphur-yellow, with tiny mesial streaks of dusky; chest and upper breast sulphur-yellow, mottled with olive-green centres to the feathers, many of which have dusky tips; sides of upper breast olive-green; lower breast and abdomen bright sulphur-yellow, whitish towards vent; sides of body and flanks browner, broadly streaked with black; thighs greenish yellow towards tibial joint; under tail-coverts pale sulphur-yellow, with olive-brown centres; under wing-coverts and axillaries white, washed with pale sulphur-yellow, especially the outer edge of wing; quills below dusky, inner edge ashy. Total length 6 inches, culmen 0·5, wing 2·85, tail 2·45, tarsus 0·8.

Adult female. Rather browner than the male, and less distinctly streaked with black; wings and tail as in male, but the white on outer tail-feathers not so developed; head and neck greenish olive, not green, washed with rufous-brown on the side of the crown; lores and a distinct eyebrow as well as eyelid dull yellow; ear-coverts brown, streaked with yellow shaft-lines; cheeks dull yellow, separated from throat by a broad malar line of blackish; throat and chest dull yellow with a slight olive tinge, spotted with dull triangular marks; breast and abdomen brighter sulphur-yellow, browner on the flanks, which are streaked with black.

Young male in first winter plumage. Is very like the adult female, but is rather browner and more rufous on the wings and tail; the median and greater wing-coverts tipped with deep ochreous-buff; eyebrow and feathers below the eye ochreous; cheeks striped with ochreous yellow, followed by a broad malar stripe of blackish; throat and underparts generally pale yellow; the fore neck, chest, and sides of body washed with pale rufous; the throat and chest thickly marked with triangular spots of dusky brown; the sides of body very thickly streaked with black.

The young males seem to assume the chin-spot very quickly, but it is very often mixed with ashy. The specimen killed on the 20th of October is already beginning to show a black spot on the chin.

There seems to be very little difference between the summer and winter plumages of this species. In China a slightly different race occurs, with less black on the lores and region of the eye, these parts being ashy grey, the chin and upper throat ashy grey, blackish on the base of the former; the throat, cheek-stripe, breast, and abdomen are sulphur-yellow, paler than in *E. personata*. There is also much more white on the outer tail-feather, and the general size of the bird is slightly smaller (wing 2·75 in.). Mr. Seebohm's collection contains a male bird from Amoy obtained in March, and a female obtained at Ningpo on the 27th of January, both birds forming a part of the Swinhoe collection.

Hab. Japan; China.

a. Imm. sk.	Japan (*ex Mus. Lugd.*).	Purchased.
b. Ad. sk.	Japan.	Zoological Society.
c. ♂ ad. sk.	Yokohama.	Prof. Milne [C.].
d. ♂ ad. sk.	Yokohama, Feb. 21, 1870 (*Capt. Conrad*).	R. B. Sharpe, Esq. [P.].
e. ♂ imm. sk.	Hakodadi, Oct. 21 *.	H. Whitely [C.].
f. ♂ imm. sk.	Hakodadi, Oct. 24 (*H. W.*)	Gould Coll.
g, *h*, *i*, *k*. Ad.; *l*. Juv. sk.	Hakodadi (*Henson*).	R. B. Sharpe, Esq. [P.].
m. Ad. sk.	Nagasaki.	Purchased.
n, *o*. Imm. sk.	Nagasaki.	F. Ringer, Esq. [P.].
p, *q*, *r*. ♂ ad. sk.	Nagasaki, Dec. 24.	F. Ringer, Esq. [P.].

21. Emberiza spodocephala.

Emberiza spodocephala, *Pall. Reis. Russ. Reichs*, iii. p. 698 (1776); *id. Zoogr. Rosso-Asiat.* ii. p. 51 (1811); *Gray, Gen. B.* ii. p. 377

* *Cf.* Blakiston, Amended List B. Japan, p. 60.

(1844); *Bp. Consp.* i. p. 465 (1850); *Middend. Sibir. Reis.* p. 282 (1858); *Schrenck, Reis. Amurl.* p. 142, pl. xii. figs. 5–8 (1859); *Radde, Reis. Sibir., Vög.* p. 169 (1863); *Jerd. B. Ind.* ii. p. 374 (1863); *Dybowski, J. f. O.* 1868, p. 335; *Swinh. Ibis*, 1863, p. 377; *id. Ibis*, 1870, p. 354; *id. P. Z. S.* 1871, p. 388; *id. Ibis*, 1875, pp. 122, 450; *Tacz. Bull. Soc. Zool. France*, i. p. 176 (1876); *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 307 (1877); *David & Oust. Ois. Chine*, p. 329 (1878); *Tacz. Bull. Soc. Zool. France*, iii. p. 137 (1878); *Hume, Str. F.* 1879, p. 107; *Seebohm, Ibis*, 1880, p. 188; *Salvin, Cat. Strickl. Coll.* p. 236 (1882); *Seebohm, Ibis*, 1884, p. 182; *Blakist. Amended List B. Japan*, pp. 26, 61 (1884).

Emberiza sordida vel chlorocephala, *Hodgs. Icon. ined. in Brit. Mus., Passeres*, pl. 290. figs. 1, 2 (no. 445); *id. in Gray's Zool. Misc.* p. 84 (1844).

Emberiza melanops, *Blyth, J. A. S. Beng.* xiv. p. 554 (1845), xv. p. 39 (1846); *Bp. Consp.* i. p. 465 (1850).

Euspiza hortulana (*nec L.*), *Gray, Cat. Mamm. etc. Nepal pres. Hodgs.* p. 108 (1846).

Euspiza melanops, *Blyth, Cat. B. Mus. As. Soc.* p. 129 (1849).

Citrinella spodocephala, *Gray, Hand-l. B.* ii. p. 113, no. 7688 (1870).

Adult male in summer plumage. General colour above brown, the feathers of the upper back slightly washed with rufous, edged with fulvous and broadly streaked down the middle with black; scapulars like the back; lesser wing-coverts uniform reddish brown; median and greater series blackish brown, externally sandy brown, margined paler and tipped with buffy white, more distinct on the median coverts; the inner greater coverts more distinctly rufous externally; primary-coverts and quills dusky brown, externally fringed with ashy; quills dusky brown, externally washed with rufous, the primaries with ashy white; inner secondaries resembling the inner greater coverts; lower back, rump, and upper tail-coverts uniform earthy brown; centre tail-feathers light brown, the remainder dark brown, edged with lighter brown, the penultimate one with a large wedge-shaped mark of white near the end of the outer web, the outer feather almost entirely white save for an oblique black mark on the inner web and a small brown mark at the end of the outer web; head and neck all round, including the sides of the face and neck, throat, and chest ashy grey with a distinct wash of olive; lores, base of cheeks, and chin black; breast pale sulphur-yellow, whiter towards the vent; under tail-coverts pale sulphur-yellow; thighs ashy olive; sides of breast and flanks reddish brown, rather distinctly striped with black; axillaries very pale sulphur-yellow; under wing-coverts white with dusky bases; quills dusky below, ashy whitish along the edge of the inner web: "bill brown, with the point blackish and the lower mandible whitish; feet flesh-colour; iris chestnut-brown" (*A. David*). Total length 4·75 inches, culmen 0·45, wing 2·7, tail 2·15, tarsus 0·75.

Adult male in winter plumage. Only differs from the summer plumage in being more olive-yellow on the head and neck, some of the feathers of the crown and hind neck being tipped with rufous-brown.

Adult female. Rather browner on the head than the male and not so ashy; no black on the face or chin; ear-coverts brown, streaked with yellowish shaft-lines; lores, eyelid, and an indistinct eyebrow yellowish buff; a broad cheek-stripe of pale sulphur-yellow widening out on the side of the neck; throat and under surface of body pale sulphur-yellow, olive-greenish on the throat and fore neck; a distinct malar streak of dusky blackish spots; sides of body and flanks reddish brown, streaked with black; lower abdomen and under tail-coverts yellowish white.

Old females in the breeding-season become a little more ashy on the head and neck. *Young birds* are always browner than the adults above, and have a number of dusky spots on the throat; otherwise they greatly resemble the old females. *Young females* (*Mus. H. Seebohm*) are pale brown above, with less developed black centres on the mantle, the head brown, washed with rufous and streaked with black; under surface dull white, with only a slight tinge of sulphur-yellow on the abdomen and axillaries; the throat pale olive-yellow, browner on the fore neck and chest, with brown shaft-lines. *Young males in winter plumage* resemble the adult female, but seem to have more dusky spots on the throat, which commences to become dusky olive in April, with blackish on the chin. Some (probably of an earlier brood) have dusky olive throats in November, but always show dusky spots.

Hab. Siberia, eastwards from the Yenesai Valley. Japan, wintering in China, the eastern Himalayas, Assam, and Manipur.

a. ♂ ad. sk.	Siberia.	Purchased.
b. ♀ ad. sk.	Tientsin, China.	Mr. Fleming [C.].
c. ♂ ad. sk.	Sli-he, China, Nov. (*R. Swinhoe*).	H. Seebohm, Esq. [P.].
d. ♂ ad. sk.	Amoy, Nov. (*R. Swinhoe*).	Salvin-Godman Coll.
e. Ad. sk.	Amoy, Nov. (*R. Swinhoe*).	Hume Coll.
f, g. ♂ ad. sk.	Amoy, Nov. (*R. Swinhoe*).	Gould Coll.
h. ♀ ad. sk.	Amoy, Nov. (*R. Swinhoe*).	H. Seebohm, Esq. [P.].
i. ♂ ad. sk.	Amoy, April (*R. Swinhoe*).	H. Seebohm, Esq. [P.].
k. ♀ imm. sk.	Chusan, Dec. (*J. R. Reeves*).	Gould Coll.
l. ♂ ad. sk.	Shanghai, Jan. 5, 1884.	F. W. Styan, Esq. [P.].
m. ♂ ad. sk.	Shanghai, Oct. 18, 1885.	F. W. Styan, Esq. [P.].
n. Ad. sk.	Canton.	Gould Coll.
o, p. ♂ ad.; *q, r.* ♂ imm. sk.	Nepal.	Hodgson Coll. (Types of *E. sordida.*)
s. imm. sk.	Native Sikhim, March 1878 (*L. Mandelli*).	Hume Coll.
t. ♂ ad. sk.	Buxa Dooars, Feb. 1878 (*L. Mandelli*).	Hume Coll.
u, v. Ad. sk.	Bhootan Dooars, Jan. 1876 (*L. Mandelli*).	Hume Coll.
w. Ad. sk.	Bhootan Dooars, Feb. 1876 (*L. Mandelli*).	Hume Coll.

x. ♂ ad. sk.	Sadha, Assam, Dec. 29, 1876.	Hume Coll.
y, *z*. ♂ ad. sk.	Dibrughur, Assam, Feb. (*J. R. Cripps*).	Hume Coll.
a'. ♀ imm. sk.	Dibrughur, Assam, Oct. 24, 1880 (*J. R. Cripps*).	Hume Coll.
b'. ♂ ad. sk.	Tippera Hills, Jan. 1870.	Hume Coll.
c'. ♂ ad. sk.	Dilhusha, Cachar, 1877.	Hume Coll.
d'. ♀ ad. sk.	Dilhusha, Cachar, Jan. 10, 1879 (*J. Inglis*).	Hume Coll.
e'. ♂ ad. sk.	Cachar, March, 1871.	Hume Coll.
f'. ♂ ad. sk.	West of New Karreemganj, Sylhet, Jan. 24, 1881 (*A. O. H.*).	Hume Coll.
g'. ♂ ad. sk.	Silchar, Jan. 29, 1881 (*A. O. H.*).	Hume Coll.
h'. ♂ ad. sk.	Limata River, Manipur, Feb. 15, 1881 (*A. O. H.*)	Hume Coll.
i'. ♀ ad. sk.	Manipur Khas, Feb. 22, 1881 (*A. O. H.*).	Hume Coll.
k', *l'*. ♂ ad. sk.	Manipur, Feb. 24, 1881 (*A. O. H.*).	Hume Coll.
m', *n'*, *o'*. ♂ ad. sk.	Manipur, March 5, 1881 (*A. O. H.*).	Hume Coll.
p'. ♂ ad. sk.	Boori-bazar, Manipur, March 11, 1881 (*A. O. H.*).	Hume Coll.
q'. ♀ ad. sk.	Bishnoopur, Manipur, March 13, 1881 (*A. O. H.*).	Hume Coll.
r', *s'*, *t'*. ♂ ad.; *u'*, *v'*. ♀ ad. sk.	Moirang, Manipur, March 1881 (*A. O. H.*).	Hume Coll.
w', *x'*, *y'*. ♂ ad.; *z'*. ♀ ad. sk.	Soognoo, Manipur, March 1881 (*A. O. H.*).	Hume Coll.
α, *β*. ♂ ad.; *γ*. ♀ ad. sk.	Koombee, Manipur, March 31, 1881 (*A. O. H.*).	Hume Coll.
δ, *ε*. ♀ ad. sk.	Kokshin-Koolel, Manipur, April 7, 1881 (*A. O. H.*).	Hume Coll.
ζ, *η*. ♂ ad.; *θ*. ♀ ad. sk.	Kokshin-Koonoo, Manipur, April 1, 1881 (*A. O. H.*).	Hume Coll.
ι. ♀ ad. sk.	Sogam, Manipur, March 29, 1881 (*A. O. H.*)	Hume Coll.

22. Emberiza cirlus.

Le Bruant de Haye, *Briss. Orn.* iii. p. 263 (1760); *Daubent. Pl. Enl.* v. pl. 653. fig. 1.

Emberiza cirlus, *Linn. Syst. Nat.* i. p. 311 (1766); *Koch, Syst. baier. Zool.* p. 211 (1816); *Temm. Man. d'Orn.* p. 313 (1820); *Naum. Vög. Deutschl.* iv. Taf. 102. figs. 3, 4 (1824); *Roux, Orn. Provenç.* pls. 105, 106 (1825); *Werner, Atlas, Granivores*, pl. 30 (1827); *Gould, B. Eur.* iii. pl. 175 (1837); *Macgill. Hist. Brit. B.* i. p. 450 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p 36 (1838); *Crespon, Orn. Gard*, p. 225 (1840); *Keys. u. Blas. Wirb. Eur.* p. 155 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 173 (1840); *Selys-Longch. Faun. Belge*, p. 81 (1842); *Yarr. Brit. B.* i. p. 448 (1843); *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 465 (1850); *Cab. Mus. Hein.* Th. i. p. 128 (1850); *Schl. Vog. Nederl.*

pl. 156 (1854); *Jaub. et Barth.-Lapomm.* p. 155 (1859); *Tristr. Ibis*, 1859, p. 295; *Salvin, t. c.* p. 314; *Linderm. Vög. Griechenl.* p. 54 (1860); *Powys, Ibis*, 1860, p. 138; *Schl. Dier. Nederl. Vog.* pl. 15. figs. 3, 4 (1861); *Gätke, Ibis*, 1862, p. 390; *Gray, List Brit. B.* p. 104 (1863); *Wright, Ibis*, 1864, pp. 54, 292; *Giglioli, Ibis*, 1865, p. 57; *Crewe, t. c.* p. 114; *More, t. c.* p. 126; *Tristr. Ibis*, 1867, p. 367; *Degl. et Gerbe, Orn. Eur.* i. p. 311 (1867); *Loche, Expl. Sci. Algér.* ii. p. 171 (1867); *Smith, Ibis*, 1868, p. 444; *Borggr. Vogelf. Norddeutschl.* p. 72 (1869); *Saunders, Ibis*, 1869, p. 172; *Doderl. Avif. Sicil.* p. 88 (1869); *Elwes & Buckley, Ibis*, 1870, p. 194; *Wright, t. c.* p. 489; *Fritsch, Vög. Eur.* tab. 17. figs. 3, 4 (1871); *Salvad. Faun. Ital., Ucc.* p. 138 (1871); *Gould, B. Gt. Br.* iii. pl. 23 (c. 1871); *R. Gray, B. West Scotl.* p. 131 (1871); *Dresser, B. Eur.* iv. p. 177, pl. 210 (1871); *Saunders, Ibis*, 1871, p. 217; *Harting, Handb. Brit. B.* p. 26 (1872); *Brooke, Ibis*, 1873, p. 246; *Cordeaux, Ibis*, 1875, p. 183; *Danf. & Harvie Brown, t. c.* p. 312; *Irby, B. Gibr.* p. 116 (1875); *Fallon, Ois. Belg.* p. 89 (1875); *Rowley, Orn. Misc.* ii. p. 73, pl. xlvi. figs. 2, 4 (1876); *Wharton, Ibis*, 1876, p. 25; *Danf. Ibis*, 1878, p. 22; *Irby, Ibis*, 1883, p. 184; *B. O. U. List Brit. B.* p. 60 (1883); *Chapman, Ibis*, 1884, p. 95; *Saunders, t. c.* p. 376; *Seebohm, Hist. Brit. B.* ii. p. 156 (1884); *Radde, Orn. Cauc.* p. 191 (1884); *Whitehead, Ibis*, 1885, p. 40; *Giglioli, Avif. Ital.* p. 48 (1886); *Salvad. Elench. Ucc. Ital.* p. 163 (1887).

Le Zizi ou Bruant de Haye, *Montb. Hist. Nat. Ois.* iv. p. 347 (1778).

Cirl Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 190 (1783).

Emberiza eleathorax, *Bechst. Orn. Taschenb.* p. 135 (1802).

Citrinella cirlus, *Gray, Hand-l. B.* ii. p. 113, no. 7684 (1869).

Adult male in summer plumage. General colour above chestnut, with central streaks of black to the dorsal feathers, which are also slightly edged with ashy fulvous; lower back and rump olive-greenish, with blackish streaks down the centres of the feathers; upper tail-coverts more rufescent, streaked with black along the shaft; lesser wing-coverts ashy olive; median coverts dusky brown, edged with ashy olive; greater coverts dusky brown, externally fulvous-brown, with pale fulvous tips; bastard-wing and primary-coverts dusky brown, narrowly fringed with ashy fulvous; quills blackish brown, edged with olive, the inner secondaries externally chestnut like the back, with a spot of the same colour at the end of the inner web; tail-feathers blackish brown, with ashy fulvous margins, the outer feather white along the outer web, and with a large wedge-shaped mark of white on the inner web, leaving an oblique basal mark of black on the inner web as well as the shaft, which widens out slightly towards the end of the feather; the penultimate feather all blackish excepting a smaller wedge-shaped mark near the end of the inner web; head and hind neck olive-green, the latter with narrow shaft-lines of black, the crown more broadly streaked with black; a supra-loral spot, as well as a streak over the eye, sulphur-yellow; lores and eyelid black; feathers below the eye sulphur-yellow, extending on to the ear-coverts, the upper and hinder margins of which are black; cheeks and upper throat black, followed by a crescentic band of sulphur-yellow, which reaches to the sides of the neck; fore neck and chest dull olive-greenish; breast pale chestnut, with ashy

margins to the feathers; abdomen pale sulphur-yellow, streaked on the sides with black shaft-lines, the flanks being reddish brown, more broadly streaked with black; thighs sulphur-yellow, mottled with black bases; under tail-coverts pale sulphur-yellow, with black shaft-lines; axillaries and under wing-coverts pale yellow, with ashy bases to the feathers; quills dusky brown, ashy whitish along the edge of the inner web. Total length 5·5 inches, culmen 0·45, wing 3·9, tail 2·45, tarsus 0·65.

Adult male in winter plumage. Differs from the summer plumage in the greater amount of olive-green on the upper surface, the whole back being washed with olive-greenish edges to the feathers; the lower back, rump, and upper tail-coverts entirely dull olive-greenish, the head and neck also strongly olive-greenish and distinctly streaked with black; the light edges to the wing-coverts and secondaries much more distinctly marked than in summer; all the black of the cheeks, throat, and ear-coverts obscured by olive-yellow edges to the feathers; the olive of the chest-band duller, and the chestnut on the sides of the breast obscured by yellowish edges to the feathers.

The summer plumage seems to be attained rather late in the season, for plentiful traces of winter plumage are seen in a specimen shot as late as the 5th of May.

Adult female in breeding-plumage. Distinguished from the male by the absence of the black and yellow facial markings; otherwise the upper surface in the two sexes is not very different, though the olive colour of the head is duller; the wings and tail are similar to those of the male. Underneath, the colouring is totally dissimilar: there is no black on the throat, nor any yellow band across the lower throat; over the eye a slightly indicated streak of white; lores and feathers below the eye buffy white; ear-coverts brown, blackish on the hinder margin; cheeks and throat dull white, washed with yellow, the former with a streak of dark brown along the upper edge, and a line of blackish brown separating the cheeks from the throat, which is also minutely spotted with black; the lower throat yellowish buff, minutely streaked with black; fore neck and chest dull ashy olive, streaked with black shaft-lines; breast and abdomen pale yellow, whiter towards the vent, which, with the lower abdomen, is uniform; all the rest of the under surface minutely streaked with black shaft-lines, broader on the sides of the body and flanks, which are slightly washed with brown; the sides of the upper breast pale chestnut with black shaft-streaks.

Adult female in winter plumage. Differs from the summer plumage in being browner above, the head like the back; the edges to the greater coverts paler, ashy fulvous at tip; the greater coverts and secondaries more broadly edged with pale chestnut; lower back and rump browner than in summer; ear-coverts brown, with a central mark of dull yellowish, the upper and lower edges blackish; lores dull yellowish; superciliary streak and ring of feathers round the eye brighter yellow, the former with narrow black shaft-lines; cheeks and throat clear yellow, numerously spotted with triangular

marks of black; a broad malar line of black; fore neck and breast pale vinous brown, rather olive on the former, both rather thickly streaked with triangular spots of black; abdomen and under tail-coverts clear yellow, with narrow black shaft-lines to some of the feathers; the sides of the body and flanks pale vinous-brown, with distinct longitudinal streaks of black.

Young females in winter plumage. Browner than the adults, especially on the throat and chest; the sides of the face and ear-coverts nearly uniform brown.

Hab. Europe generally, excepting the northern parts, extending eastwards into Russia and Asia Minor.

a. ♂ ad. sk.	Hampstead Heath (*O. S.*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Burnham, Bucks, Dec. 28, 1874.	R. B. Sharpe, Esq. [P.].
c, *d*. ♂; *e*. ♀ ad. sk.	Cookham, Berks.	Gould Coll.
f. ♂ ad. st.	Cookham.	Mr. W. Briggs [P.].
g. ♂ ad. sk.	Cookham (*W. Briggs*).	R. B. Sharpe, Esq. [P.].
h, *i*. ♂; *k*. ♀ ad. sk.	Brighton, Sussex, Nov.	R. B. Sharpe, Esq. [P.].
l, *m*. ♂ ♀ ad. st.	Brighton, Sussex, Mar.	R. B. Sharpe, Esq. [P.].
n. ♂ ad. sk.	Avington, Hants, May 5.	R. B. Sharpe, Esq. [P.].
o. ♀ ad. sk.	Somersetshire.	Montagu Coll.
p. ♂ ad. sk.	Devonshire.	Montagu Coll.
q. ♂ ad. sk.	Torquay, Devonshire, May 12, 1868 (*H. B. Tristram*).	Hume Coll.
r. ♀ juv. sk.	Axmouth, Devonshire, Oct. 28, 1882.	R. B. Sharpe, Esq. [P.].
s. ♂ ad. sk.	Le Mosnil, Lillebonne, Seine Inférieure, France, March 6 (*V. Pluche*).	Edward Hargitt, Esq. [P.].
t. ♂ ad. sk.	North of France (*H. E. Dresser*).	Hume Coll.
u. ♂ ad. sk.	Corsica, Jan. 24.	John Whitehead, Esq. [P.].
v, *w*. ♀ ad. sk.	Gibraltar, March 4, 1870 (*L. H. Irby*).	Hume Coll.
x. ♂ ad. sk.	Gibraltar, Feb. 7 (*L. H. Irby*).	Hume Coll.
y. ♂ ad. sk.	Coimbra, Portugal, Nov. 1886.	Dr. L. Vieira [P.].
z. ♂ ad. sk.	Khifan M'Sakta, Algeria, April 11 (*O. S.*).	Salvin-Godman Coll.
a'. ♀ ad. sk.	Macedonia, Oct. 29 (*Dr. Krüper*).	Salvin-Godman Coll.
b'. ♂ ad. sk.	Mount Olympus, Oct. 27 1869 (*Dr. Krüper*).	Hume Coll.
c', *d'*. ♂ ♀ ad. sk.	Smyrna (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
e'. ♀ ad. sk.	Smyrna, April 18 (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
f'. ♀ ad. sk.	Asia Minor, April 8 (*T. Robson*).	Gould Coll.
g'. ♂; *h'*, *i'*. ♀ ad. sk.	Turkey, Jan. 4 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
k'. Skeleton.	England.	Purchased.

23. Emberiza cinerea.

Emberiza cinerea, *Strickl. P. Z. S.* 1832, p. 99; *Jard. Mem. Strickl.* p. clxiii, pl. 6 (1858); *Gould, B. Asia,* v. pl. 8 (1870); *Krüper, J. f. O.* 1875, p. 268; *Dresser, B. Eur.* iv. p. 159, pl. 207 (1877); *Salv. Cat. Strickl. Coll.* p. 235 (1882); *Sharpe, Ibis,* 1886, p. 497.
Euspiza cinerea, *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 464 (1850); *Gray, Hand-l. B.* ii. p. 112, no. 7681 (1870).
Emberiza cineracea, *Brehm, Vogelf.* p. 114 (1855).
Spodiospina cinerea, *Heugl. Orn. N.O.-Afr.* i. p. 660 (1871).

Adult male. General colour above light ashy brown, the mantle and back streaked with blackish-brown centres to the feathers, the lower back and rump uniform ashy brown; upper tail-coverts brown, edged with ashy; lesser wing-coverts ashy grey, with dusky brown bases; median and greater coverts dark brown, edged with ashy brown, whitish at the ends, forming two narrow wing-bars; bastard-wing, primary-coverts, and quills dark brown, narrowly fringed with ashy brown, the edges broader and more fulvescent on the secondaries; tail-feathers dark brown, edged with ashy brown, the two outer ones with a large mark of white at the end of the inner web; crown of head dull yellowish olive, the lores and feathers round the eye sulphur-yellow; ear-coverts yellowish olive; sides of neck ashy grey, as also the hinder neck, forming an indistinct collar; cheeks and entire throat sulphur-yellow; remainder of under surface pale ashy grey, becoming lighter on the abdomen; the vent and under tail-coverts white; thighs dark ashy; axillaries and under wing-coverts white, with ashy-brown bases to the feathers; quills ashy below, paler ashy along the edge of the inner web. Total length 6·2 inches, culmen 0·5, wing 3·4, tail 2·4, tarsus 0·75.

Adult female. Differs from the male in having the head and neck brown like the back, the former streaked in the same manner as the mantle; the hind neck and sides of neck uniform ashy brown; lores and feathers round the eye yellowish white; ear-coverts ashy brown, slightly tinged with yellow, and having a central patch of pale yellowish white; cheeks and throat pale sulphur-yellow, with a few tiny streaks of dark brown along the malar line; lower throat and fore neck pale ashy brown, also narrowly streaked with dark brown shaft-lines; centre of breast, abdomen, and under tail-coverts dull white, the latter with pale brown centres; sides of body and flanks pale ashy brown. Total length 6·5 inches, culmen 0·45, wing 3·35, tail 2·6, tarsus 0·75. (*Mus. H. Seebohm.*)

Young male in first winter plumage. Resembles the adult female, but is rather more ashy brown above, the dark streaks on the head and back very distinct; wing-coverts and inner secondaries very broadly margined with isabelline or pale sandy buff; no yellow on the head or throat, the latter white, spotted with triangular marks of dark brown extending on to the fore neck; the flanks also longitudinally streaked with dark brown. (*Mus. H. Seebohm.*)

Young female. Only differs from the male in being less distinctly spotted and streaked on the underparts.

Hab. Asia Minor, extending eastwards into Persia.

a. ♂ ad. sk.	Smyrna, April 25, 1864 (*Schrader & Krüper*).	Gould Coll.
b. ♀ juv. sk.	Smyrna, Sept. 8, 1863 (*L. Schrader*).	Gould Coll.
c. ♂ ad. sk.	Smyrna, April 20, 1871 (*Dr. Krüper*).	Salvin-Godman Coll.
d. ♀ imm. sk.	Bushire, March 27, 1885.	A. J. V. Palmer, Esq. [P.].

24. Emberiza hortulana.

The Hortulon, *Albin, Nat. Hist. B.* iii. p. 46, pl. 50 (1740, *fig. pess.*).
L'Ortolan, *Briss. Orn.* iii. p. 269 (1769); *Daubent. Pl. Enl.* v. pl. 247. fig. 1; *Montb. Hist. Nat. Ois.* iv. p. 305, pl. 14 (1778).
Emberiza hortulana, *Linn. Syst. Nat.* i. p. 309 (1766); *Bodd. Tabl. Pl. Enl.* p. 15 (1783); *Pall. Zoogr. Rosso-Asiat.* ii. p. 50 (1811); *Koch, Syst. baier. Zool.* p. 210 (1816); *Temm. Man. d'Orn.* i. p. 311 (1820); *Naum. Vög. Deutschl.* iv. pl. 103 (1824); *Roux, Orn. Provenç.* pl. 115 (1825); *Werner, Atlas, Granivores*, pl. 23 (1827); *Ménétr. Cat. rais. Cauc.* p. 40 (1832); *Gould, B. Eur.* iii. pl. 176 (1837); *Macgill. Brit. B.* i. p. 457 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 36 (1838); *Crespon, Orn. Gard*, p. 221 (1840); *Keys. u. Blas. Wirb. Eur.* p. 155 (1840); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 175 (1840); *Selys-Longch. Faun. Belge*, p. 81 (1842); *Yarr. Brit. B.* i. p. 455 (1843); *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 465 (1850); *Kjærb. Orn. Dan.* pl. 25. fig. 2 (1852); *Schl. Vog. Nederl.* pl. 155 (1854); *Hewits. Eggs Brit. B.* i. p. 191, pl. xviii. fig. 1 (1856); *Sundev. Svensk. Fogl.* pl. vii. figs. 1, 2 (1856); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 160 (1859); *Tristr. Ibis*, 1859, p. 34; *Powys, Ibis*, 1860, p. 138; *Linderm. Vög. Griechenl.* p. 52 (1860); *Schl. Dier. Nederl. Vog.* pl. 15. figs. 5, 6 (1861); *Gray, List Brit. B.* p. 103 (1863); *Wright, Ibis*, 1864, p. 55; *Sperling, t. c.* p. 280; *Filippi, Viagg. Pers.* p. 349 (1865); *Lilford, Ibis*, 1866, p. 388; *Degl. et Gerbe, Orn. Eur.* i. p. 316 (1867); *Taylor, Ibis*, 1867, p. 64; *Tristr. t. c.* p. 367; *Drake, t. c.* p. 427; *Smith, Ibis*, 1868, p. 444; *Saunders, Ibis*, 1869, p. 175; *Borggr. Vogelf. Norddeutschl.* p. 71 (1869); *Doderl. Avif. Sicil.* p. 87 (1869); *Droste, Vogelw. Borkum*, p. 109 (1869); *Elwes & Buckley, Ibis*, 1870, p. 194; *Heugl. Orn. N.O.-Afr.* pt. 2, p. 661 (1870); *Fritsch, Vög. Eur.* pl. 17. fig. 1 (1870); *Saunders, Ibis*, 1871, p. 217; *Salvad. Faun. Ital., Ucc.* p. 139 (1871); *Dresser, B. Eur.* iv. p. 185, pl. 210 (1871); *R. Gray, B. West Scotl.* p. 132 (1871); *Harting, Handb. Brit. B.* p. 27 (1872); *Shelley, B. Egypt*, p. 145 (1872); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Brooke, Ibis*, 1873, p. 246; *Keulem. Onze Vogels*, ii. pl. 39 (1873); *Durnf. Ibis*, 1874, p. 405; *Cordeaux, Ibis*, 1875, p. 183; *Irby, B. Gibr.* p. 116 (1875); *Dresser, Ibis*, 1875, p. 248; *Fallon, Ois. Belg.* p. 88 (1875); *Wharton, Ibis*, 1876, p. 25; *Blanf. East. Persia*, ii. p. 259 (1876); *Newton, ed. Yarr. Brit. B.* ii. p. 57 (1876); *Finsch, MT. zool.-bot. Ver. Wien*, xxix. p. 214 (1879); *Biddulph, Ibis*, 1881, p. 80; *Giglioli, Icon. Avif. Ital.* pl. 191 (1882); *B. O. U. List Brit. B.* p. 61 (1883); *Seebohm, Hist. Brit. B.* ii. p. 153, pl. 15 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90; *Tristr. Faun. & Flor. Palest.* p. 71 (1884); *Radde, Orn. Cauc.* p. 192 (1884); *Giglioli, Avif. Ital.* p. 49 (1886); *Salvad. Elench. Ucc. Ital.* p. 164 (1887).

Green-headed Bunting, *Brown, Illustr. Zool.* p. 73, pl. 30 (1776); *Lath. Gen. Syn.* ii. pt. i. p. 211 (1783).
Ortolan Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 166 (1783).
Emberiza moelbyensis, *Sparrm. Mus. Carls.* i. pl. 21 (1786).
Emberiza chlorocephala, *Gm. Syst. Nat.* i. p. 887 (1788).
Emberiza badensis, *Gm. tom. cit.* p. 873 (1788).
Emberiza tunstalli, *Lath. Ind. Orn.* i. p. 418 (1790).
Citrinella hortulana, *Kaup, Natürl. Syst.* p. 142 (1829); *Gray, Hand-l. B.* i. p. 133, no. 7687 (1869).
Emberiza pinguescens, *Brehm, Vög. Deutschl.* p. 295 (1831).
Euspiza hortulana, *Blyth, Cat. B. Mus. As. Soc.* p. 129 (1849).
Emberiza shah, *Bp. Consp.* i. p. 465 (1850).
Glycispina hortulana, *Cab. Mus. Hein.* Th. i. p. 128 (1850); *Giglioli, Ibis*, 1865, p. 58; *Gould, B. Gt. Br.* iii. pl. 27 (c. 1870); *Bogd. B. Cauc.* p. 71 (1879).
Emberiza delicata, *Brehm, Vogelf.* p. 113 (1855).
Emberiza antiquorum, *Brehm, t. c.* p. 113 (1855).
Emberiza intercedens, *Brehm, t. c.* p. 113 (1855).
Hortulanus chlorocephalus, *Bp. Cat. Parzud.* p. 4 (1856); *Bettoni, Ucc. nidif. Lomb.* i. pl. 68 (1865); *Loche, Expl. Sci. Algér.* ii. p. 178 (1867).
Citrinella shah, *Gray, Hand-l. B.* ii. p. 113, no. 7691.

Adult male. General colour above pale reddish brown, with mesial black streaks to the feathers of the mantle, upper back, and scapulars, the latter distinctly rufescent; lower back and rump more uniform, with scarcely distinguishable shaft-streaks; lesser wing-coverts ashy with blackish bases; median and greater coverts blackish, externally edged with pale rufous, the inner secondaries similarly coloured; bastard-wing, primary-coverts, and quills blackish brown, edged with pale ashy rufous; tail-feathers blackish brown, with lighter brown edges, the penultimate feather with a broad wedge-shaped mark of white at the end of the inner web, larger on the outer feather, which is also edged with white towards the base; entire head dusky greenish olive; lores yellowish; eyelid white; ear-coverts like the crown; cheeks pale sulphur-yellow, separated from the throat by a distinct moustachial streak of dusky greenish olive, which widens out towards the sides of the neck, which are also of the same colour; throat pale sulphur-yellow, the fore neck and chest dusky greenish olive; remainder of under surface of body pale cinnamon-rufous, much lighter on the vent and under tail-coverts, which are edged with ashy; axillaries pale sulphur-yellow; under wing-coverts white, washed with yellow, and with ashy bases; quills dusky below, ashy along the inner web. Total length 6 inches, culmen 0·5 wing 3·35, tail 2·5, tarsus 0·75.

Young. Similar to the old female, but more yellow below, without any tinge of fawn-colour, the whole throat, breast, and sides of body streaked with dark brown or blackish.

Adult female. Very similar to the male, from which it differs in its paler coloration and in having the lower throat and fore neck streaked with dark brown. Total length 5·8 inches, culmen 0·5, wing 3·2, tail 2·4, tarsus 0·75.

In *winter plumage* the male is rather lighter coloured than in

summer, by reason of the paler margins to the feathers, which become abraded during the breeding-time; underneath, the difference in the plumage of the two seasons is very slight, the cinnamon colour of the under surface being overshaded with ashy margins to the feathers. The *female in winter* has more distinct streaks of dusky blackish on the throat and fore neck, but these are also in all probability developed with greater force in young than in old birds. The richness of the colour certainly depends greatly upon the age of the individual, old males being sometimes almost chestnut underneath. *Young males in first winter plumage* are streaked on the chest like the old females.

Hab. Europe generally.

a. ♀ juv. sk.	Hampstead, Middlesex, Nov. 1867.	J. E. Harting, Esq. [P.].
b, *c*. ♂ ♀ ad. sk.	Stockholm, June 14.	Mr. W. Meves [C.].
d. ♂ ad. sk.	Skåne, May 5 (*Meves*).	R. B. Sharpe, Esq. [P.].
e. ♀ ad. sk.	Skåne, April 23 (*Meves*).	R. B. Sharpe, Esq. [P.].
f. Juv. sk.	Christiania, June 19, 1870 (*R. Collett*).	Christiania Museum.
g. ♀ ad. sk.	Valkenswaard, Holland (*J. Baker*).	Salvin-Godman Coll. [P.].
h. ♂ ad. sk.	Belgium, May.	Brussels Mus. [P.].
i. ♂ ad. sk.	Marseilles, S. France, Sept. 1866 (*H. B. Tristram*).	Hume Coll.
k. ♂ ad. sk.	Savoy (*Bailly*).	India Museum.
l. ♂ ad. st.	Italy.	Purchased.
m. Ad. sk.	Algeria (*Loche*).	Gould Coll.
n. ♂ ad. sk.	Turkey, June 14 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
o. ♂ ad. sk.	Turkey, April 20 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
p, *q*. ♀ ad. sk.	Smyrna, May (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
r. ♂ ad.; *s*. ♀ imm. sk.	Smyrna (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	Smyrna, April (*Dr. Krüper*).	R. B. Sharpe, Esq. [P.].
u, *v*. ♂ ad. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll.
w. ♀ ad. sk.	Near Mount Tabor.	Canon Tristram [C.].
x. ♂ ad. sk.	Samaria.	Canon Tristram [C.].
y. ♂ ad. sk.	Persia.	Purchased.
z. ♀ ad. sk.	S.E. of Karman, S.E. Persia, May 2, 1872.	W. T. Blanford, Esq. [P.].
a'. Ad. sk.	Fao, Persian Gulf.	W. D. Cumming, Esq. [P.].
b'. ♂ ad. sk.	Bushire, April 10, 1885.	A. J. V. Palmer, Esq. [P.].
c'. ♂ ad. sk.	Sergiopol, Turkestan, May 7 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
d'. ♂ ad. sk.	Yarkand (*J. Biddulph*).	Hume Coll.
e', *f'*, *g'*. ♂ ad. sk.	Tirphul, W. Afghanistan, April 20, 1885.	Dr. Aitchison [C.].

h'. ♂ ad.; *i'*. Juv. sk. Lepsa River, June. Moscow Mus. [P.].

k', *l'*. Skeletons. Purchased.

25. Emberiza buchanani.

? Emberiza hortulana, *Sykes, P. Z. S.* 1832, p. 93 (*nec L.*).

Emberiza buchanani, *Blyth, J. A. S. Beng.* xiii. p. 957 (1844), xvi. p. 780 (1847); *Hume, Str. F.* 1878, vol. ii. p. 150; *id. Str. F.* 1879, p. 107; *Butler, Cat. B. Sind*, p. 47 (1879); *Barnes, Str. F.* 1880, p. 218; *Butler, Cat. B. S. Bomb. Pres.* p. 62 (1880); *Biddulph, Ibis*, 1881, p. 80; *Reid, Str. F.* 1881, p. 57; *Davids. t. c.* p. 313.

Euspiza huttoni, *Blyth, J. A. S. Beng.* xviii. p. 811 (1849).

Emberiza huttoni, *Jerd. B. Ind.* ii. p. 373 (1863); *Blyth, Ibis*, 1867, p. 42; *Blanf. t. c.* p. 463; *Hume, Ibis*, 1870, p. 400; *Holdsw. Ibis*, 1872, p. 473; *Blanf. Ibis*, 1874, p. 81; *id. East. Persia*, ii. p. 258 (1876); *Butler, Str. F.* 1876, p. 35; *Fairb. t. c.* p. 26; *Butler, Str. F.* 1877, pp. 221, 230; *Blanf. t. c.* p. 246; *Hume, t. c.* p. 329; *Finsch, Verh. z.-b. Gesellsch. Wien*, xxix. p. 214 (1879); *Scully, Ibis*, 1881, p. 575; *Swinh. Ibis*, 1882, p. 113; *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90; *Seebohm, Ibis*, 1883, p. 11; *Severtz. t. c.* p. 61; *Radde, Orn. Cauc.* p. 195 (1884); *Murray, Vertebr. Faun. Sind*, p. 185 (1884).

Emberiza cerrutii, *De Filippi, Arch. per la Zool.* ii. fasc. 2, p. 383 (1863); *id. Viagg. Pers.* p. 249 (1865); *Salvad. Atti R. Accad. Sci. Torino*, iii. p. 286 (1867); *Gould, B. Asia*, v. pl. 11 (1869); *Boyd. B. Cauc.* p. 71 (1879).

Citrinella huttoni, *Gray, Hand-l. B.* ii. p. 113, no. 7690 (1870); *Adam, Str. F.* 1873, p. 388.

Adult male in breeding-plumage. General colour above ashy brown, narrowly streaked with darker brown on the mantle and back; the lower back, rump, and upper tail-coverts uniform ashy brown; scapulars externally chestnut, with dark brown shaft-streaks; lesser wing-coverts ashy brown like the back; median coverts chestnut, with brown bases; greater coverts dark brown, edged with ashy rufous; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy, the secondaries externally ashy rufous; upper tail-coverts and centre tail-feathers light brown, edged with rufous, the remainder of the tail-feathers blackish, edged with brown, the two outer ones with a large wedge-shaped mark of white at the end of the inner web, the outermost also white along the outer web; crown of head dull ashy grey, with narrow blackish shaft-lines, the hind neck and sides of neck browner; a conspicuous white eyelid; lores dull whitish; sides of face ashy, as also the cheeks and ear-coverts; chin and fore part of cheeks dull white, with a tolerably distinct dusky malar streak; throat and remainder of under surface of body pale chestnut, with indistinct ashy margins; sides of upper breast ashy grey; sides of body and flanks brown; lores, abdomen, and under tail-coverts paler than the breast, the lateral coverts whitish; axillaries and under wing-coverts ashy white with dusky bases; quills pale brown below, ashy rufous along the inner web. Total length 6 inches, culmen 0·45, wing 3·35, tail 2·7, tarsus 0·75.

The *adult male in winter plumage* scarcely differs from the

summer plumage, but the pale edges to the wing-coverts are a little more distinct; throat more hoary and obscuring the rufous; the rufous scapulars also obscured by ashy margins to the feathers: "bill pink or brownish pink; legs and feet fleshy pink or yellowish pink; claws pale brown. Length 6·62–6·78, tail from vent 2·96–3·1" (*A. O. Hume*).

Adult female in breeding-plumage. Duller in colour than the male, especially on the under surface of the body, which is pale vinous chestnut, with ashy edges to the feathers; ear-coverts brown, instead of ashy, and the head also not so distinctly grey: "bill fleshy brown; legs and feet yellowish brown" (*E. A. Butler*). Total length 5·6 inches, culmen 0·45, wing 3·95, tail 2·5, tarsus 0·75.

An adult female shot in November at Ajmere by Mr. Hume had the "bill, legs, and feet fleshy pink; iris brown."

The *young birds in winter plumage* are much browner than the adult, the head being a little more dusky than the back, the whole upper surface being very distinctly streaked with blackish, but showing no chestnut on the scapulars; wing-coverts broadly edged with pale rufous, the greater series with creamy white; ear-coverts reddish brown: under surface of body isabelline, the rufous of the full plumage showing more or less distinctly; breast with narrow brown shaft-streaks: "bill pink, fleshy pink, or faintly brownish pink, dusky at the tip; legs and feet fleshy pink, brownish on the joints, or pinkish fleshy orange; iris brown. Length 6·46–6·72, tail from vent 2·75–3·0" (*A. O. Hume*).

Hab. From the Caucasus throughout Persia, to Turkestan and Afghanistan, wintering in the plains of Western India. Said to have occurred near Canton in China (*cf.* Holdsw. *l. c.*), but this locality extremely doubtful.

a. ♂ ad. sk.	Saisan, Turkestan, May 29 (*Dr. Finsch*).	Geogr. Soc. Bremen.
b. ♀ ad. sk.	Elburz Mountains, Persia, Aug. 17.	W. T. Blanford, Esq. [C.].
c. ♂ ad. sk.	Hanaka, S.E. of Karman, S.E. Persia, May 2nd.	W. T. Blanford, Esq. [C.].
d. ♂ ad. sk.	Dehgirdú, plateau north of Shiraz, June 29, 1872 (*W. T. Blanford*).	Hume Coll.
e. ♀ ad. sk.	Ispidan, east of Bampur, Baluchistan, March 30.	W. T. Blanford, Esq. [C.].
f, g. ♂ ♀ ad. sk.	Kambao, W. Afghanistan, May 1, 1885.	Dr. Aitchison [C.].
h. Ad. sk.	Afghanistan (*Griffith*).	India Museum.
i. Ad. sk.	Candahar.	Capt. Hutton [P.].
k, l. ♂ ad. sk.	Candahar, April 1879 (*Sir O. St. John*).	Hume Coll.
m. ♂ ad. ak.	Khojak, Afghanistan, April 29.	Col. Swinhoe [P.].
n. ♂ ad. sk.	Gatai, Afghanistan, April 4.	Col. Swinhoe [P.].
o, p. ♂ ♀ ad.; *q.* ♂ imm. sk.	Khojak, Sept. 1881 (*Sir O. St. John*).	Hume Coll.
r, s. [♂] imm. sk.	Nal, Khelat, April 1879 (*O. T. Duke*).	Hume Coll.

t. Imm. sk.	Karachi, Sind, Sept. 13, 1877 (*E. A. Butler*).	Hume Coll.
u. ♀ ad. sk.	Hyderabad, Sind, April 21, 1878 (*E. A. Butler*).	Hume Coll.
v. ♂ ad. sk.	Eastern Narra, Sind, Oct. (*Scrope Doig*).	Hume Coll.
w. ♀ ad. sk.	Sambhur, March 14, 1873 (*R. M. Adam*).	Hume Coll.
x. ♀ ad. sk.	Sambhur, Dec. 20, 1875 (*R. M. Adam*).	Hume Coll.
y. ♀ ad. sk.	Nowah, near Sambhur, Aug. 17 (*R. M. Adam*).	Hume Coll.
z, *a'*. ♂ ♀ ad. sk.	Mount Abu, April 14, 1875 (*E. A. Butler*).	Hume Coll.
b'–*ɾ'*. ♂ ad. et imm.; *s'*–*ε*. ♀ ad. et imm. sk.	Ajmere, Nov. 1869 (*A. O. H.*).	Hume Coll.
ζ. ♀ ad. sk.	Doonda, Baghirati Valley, May 26, 1874 (*W. E. Brooks*).	Hume Coll.
η, *θ*. ♂ ad. sk.	Etawah, Dec. 14, 1870 (*W. E. Brooks*).	Hume Coll.
ι. ♂ ad.; *κ*, *λ*. ♀ imm. sk.	Etawah, Jan. 13, 1870 (*W. E. Brooks*).	Hume Coll.
μ. ♂ ad. sk.	Etawah, Feb. 10, 1871 (*W. E. Brooks*).	Hume Coll.
ν. ♂ ad. sk.	Etawah, April 6, 1867 (*W. E. Brooks*).	Hume Coll.
ξ. ♂ ad. sk.	Nagpore.	Gould Coll.
o. ♂ ad. sk.	Gurjat, Central Provinces, March 26, 1869.	Hume Coll.
π. ♂ ad. sk.	Mhow, March 30.	Col. Swinhoe [P.].
ρ. ♀ ad. sk.	Mhow, April 13.	Col. Swinhoe [P.].
σ. ♀ ad. sk.	Maunpore Ghat, Jan. 1869.	Hume Coll.
τ, *υ*. Ad. sk.	Northern Deccan (*Lieut. Burgess*).	Gould Coll.
φ, *χ*. ♂ ♀ ad. sk.	Kussumb, Khandeish, Jan. 12, 1881 (*J. Davidson*).	Hume Coll.
ψ. ♂ ad. sk.	Khoree, Dec. 26, 1880 (*J. Davidson*).	Hume Coll.
ω. ♂ ad. sk.	Khandala, March 1869.	Hume Coll.

26. Emberiza cæsia.

Emberiza cia (*nec Temm.*), *Roux, Orn. Provenç.* pl. 112 bis (1825).
Emberiza cæsia, *Cretzschm. in Rüpp. Atlas*, p. 17, Taf. 10. fig. B (1826); *Werner, Atlas, Granivores*, pl. 440 (1827); *Temm. Man. d'Orn.* iii. p. 225 (1835); *Rüpp. Neue Wirb., Vög.* p. 86 (1835–40); *Gould, B. Eur.* iii. pl. 181 (1837); *Keys. u. Blas. Wirb. Eur.* p. xxxix (1840); *Malh. Faun. Sicil.* p. 117 (1843); *Von der Mühle, Vög. Griechenl.* p. 40 (1844); *Vierth. Naum.* 1852, pt. i. p. 30; *Brehm, J. f. O.* 1854, p. 76; *Heugl. Syst. Uebers.* p. 42 (1856); *Brehm, Vogelf.* p. 113 (1855); *id. J. f. O.* 1857, p. 86; *Tristr. Ibis*, 1859, p. 34; *Linderm. Vög. Griechenl.* p. 53 (1860); *Blas.*

Naehtr. Naum. Vög. Deutschl. xiii. pl. 381 (1860); *Heugl. J. f. O.* 1862, p. 403; *Blasius, Ibis*, 1862, p. 71; *Gätke, t. c.* p. 390; *Chambers, Ibis*, 1863, p. 475; *Bree, B. Eur.* iii. p. 40, c. tab. (1864); *Degl. et Gerbe, Orn. Eur.* i. p. 318 (1867); *Tristr. Ibis*, 1867, p. 367; *Heugl. J. f. O.* 1868, p. 74; *Doderl. Avif. Sicil.* p. 89 (1869); *Fritsch, Vög. Eur.* tab. 17. fig. 5 (c. 1870); *Salvad. Faun. Ital., Uce.* p. 139 (1871); *Dresser, B. Eur.* iv. p. 213, pl. 260 (1871); *Heugl. Orn. N.O.-Afr.* ii. p. 662 (1871); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Lilford, Ibis*, 1875, p. 6; *Cordeaux, t. c.* p. 182; *Dresser, t. c.* p. 248; *Giglioli, Ibis*, 1881, p. 201; *Tristr. Ibis*, 1882, p. 404; *id. Faun. & Flor. Palest.* p. 72 (1884); *Radde, Orn. Cauc.* p. 195 (1884); *Giglioli, Avif. Ital.* p. 50 (1886); *Salvad. Elench. Uce. Ital.* p. 164 (1887).

Emberiza rufibarba, *Nordm. in Erman, Reis.* Taf. 8. figs. 1, 2 (1835); *Brehm, Vogelf.* p. 113 (1855).

Fringillaria cæsia, *Swains. Classif. B.* ii. p. 290 (1837); *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 466 (1850); *Loche, Expl. Sci. Algér., Ois.* i. p. 180 (1868); *Gray, Hand-l. B.* ii. p. 115, no. 7719 (1870); *Heugl. Orn. N.O.-Afr.* iv. App. p. cxlvi (1871).

Euspiza (Fringillaria) cæsia, *Blyth, Cat. B. Mus. As. Soc.* p. 130 (1849).

Glycispina cæsia, *Cab. Mus. Hein.* Th. i. p. 129 (1850).

Emberiza rufigularis, *Brehm, Vogelf.* p. 113 (1855).

Adult male in breeding-plumage. General colour above rufous-brown, mottled on the back with blackish centres to the feathers; lower back, rump, and upper tail-coverts uniform, or with only narrow black shaft-lines; wing-coverts blackish, edged with rufous-brown; bastard-wing, primary-coverts, and quills blackish, fringed with rufous-brown, the secondaries more broadly edged with rufous; tail-feathers blackish, narrowly edged with rufous, the two outer feathers with a large wedge-shaped mark near the end of the inner web, larger on the outer feather, which is also margined with white; entire crown and nape blue-grey, as well as the ear-coverts; lores, feathers below the eye, cheeks, and throat pale chestnut; across the lower throat and fore neck a broad band of blue-grey; remainder of the under surface of body deep chestnut, including the thighs and under tail-coverts; axillaries and under wing-coverts ashy, washed with rufous and having dusky bases; quills dusky below, ashy along the inner web: "bill reddish brown above, legs brown; iris brown" (*Shelley*). Total length 6 inches, culmen 0·45, wing 3·35, tail 2·5, tarsus 0·7.

Adult female. Differs from the male in being browner and less richly coloured; the head duller grey and striped with blackish; round the eye a ring of dull whitish; lores, sides of face, ear-coverts, and under surface of body pale chestnut or cinnamon-rufous, with a few narrow shaft-lines of black on the fore neck. Total length 5·8 inches, culmen 0·45, wing 3·05, tail 2·45, tarsus 0·7.

Hab. South-eastern Europe, ranging eastwards to the Caucasus, and westwards along the Mediterranean basin, rarely to the south of France as well as Algeria. Winters in North-eastern Africa and Arabia.

a. ♂ ad. sk.	Genoa, March 16 (*A. B. Brooke*).	J. H. Gurney, jun., Esq. [P.].
b. ♂ ad. sk.	Smyrna, March 27, 1872 (*Dr. Krüper*).	Hume Coll.
c. ♂ ad. sk.	Mount Carmel, Palestine, March 21, 1864 (*H. B. Tristram*).	Hume Coll.
d. ♂ ad. sk.	Tiberias, March 29, 1864 (*H. B. Tristram*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Mount Carmel, March 24 (*H. B. Tristram*).	Gould Coll.
f. ♀ ad. sk.	Merom, May 19 (*H. B. Tristram*).	Salvin-Godman Coll.
g. ♂ juv. sk.	Mount Tabor.	Canon Tristram [C.].
h. ♂ ad. sk.	Mount Tabor, April 5 (*H. B. Tristram*).	Gould Coll.
i. ♂ ad. sk.	Mount Hermon.	Canon Tristram [C.].
k. Ad. sk.	Palestine.	Gould Coll.

27. Emberiza cia.

Le Bruant de Prez, *Briss. Orn.* ii. p. 266 (1760).

Emberiza cia, *Linn. Syst. Nat.* i. p. 310 (1766); *Naum. Vög. Deutschl.* iv. pl. 104. figs. 1, 2 (1824); *Roux, Orn. Prov.* pls. 111, 112 (1825); *Ménétr. Cat. Rais. Canc.* p. 40 (1832); *Gould, B. Eur.* pl. 179 (1837); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 174 (1840); *Selys-Longch. Faun. Belge*, p. 81 (1842); *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 466 (1850); *Jaub. & Barth.-Lapomm. Rich. Orn.* p. 158 (1859); *Tristr. Ibis*, 1859, p. 295; *Linderm. Vög. Griechenl.* p. 55 (1860); *Powys, Ibis*, 1860, p. 138; *Wright, Ibis*, 1864, p. 54; *Giglioli, Ibis*, 1866, p. 57; *Bettoni, Ucc. Nidif. Lomb.* i. pl. 97 (1865–70); *De la Pont. Faun. Luxemb.* p. 106 (1865); *Tristr. Ibis*, 1867, p. 88; *Bearan, t. c.* p. 141; *Tristr. t. c.* p. 368; *Degl. et Gerbe, Orn. Eur.* i. p. 312 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 173 (1867); *Smith, Ibis*, 1868, p. 444; *Doderl. Avif. Sicil.* p. 88 (1869); *Saunders, Ibis*, 1869, p. 172; *Fritsch, Vög. Eur.* pl. 20. fig. 18 (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 659 (1870); *Salvad. Faun. Ital. Ucc.* p. 140 (1871); *Saunders, Ibis*, 1871, p. 217; *Gurney, t. c.* p. 291; *Dresser, B. Eur.* iv. p. 205, pls. 11, 12 (1872); *Brooke, Ibis*, 1873, p. 246; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Dresser, Ibis*, 1875, p. 247; *Fallon, Ois. Belg.* p. 89 (1875); *Irby, B. Gibr.* p. 116 (1875); *Blanf. East. Pers.* ii. p. 257 (1876); *Danf. & Harvie Brown, Ibis*, 1876, p. 312; *Tristr. Faun. & Flor. Palest.* p. 72 (1884); *Radde, Orn. Canc.* p. 193 (1884); *Giglioli, Avif. Ital.* p. 50 (1886); *Salvad. Elench. Ucc. Ital.* p. 164 (1887).

Emberiza barbata, *Scop. Ann.* i. p. 143 (1769).

Bruant de prez de France, *Daubent. Pl. Enl.* v. pl. 30. fig. 2.

Ortolan de la Lorraine, *Daub. Pl. Enl.* v. pl. 511. fig. 1.

Foolish Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 191 (1783).

Lorrain Bunting, *Lath. t. c.* p. 176 (1783).

Emberiza lotharingica, *Gm. Syst. Nat.* i. p. 882 (1788).

Cia cia, *Kaup, Natürl. Syst.* p. 193 (1829).

Emberiza meridionalis, *Cab. Mus. Hein.* Th. i. p. 128 (1850).

Emberiza hordei, *Brehm, Vogelf.* p. 114 (1855).

Emberiza canigularis, *Brehm, Vogelf.* p. 114 (1855).

Buscarla cia, *Bp. Rev. et Mag. de Zool.* 1857, p. 162.
Hylæspiza cia, *Newton in List B. Eur. Blas.* p. 13 (1862); *Bogd. B. Cauc.* p. 71 (1879).

Adult male in breeding-plumage. General colour above rufescent brown, streaked with mesial centres of black, the feathers of the mantle with paler fulvescent edges; rump uniform cinnamon-rufous; upper tail-coverts pale rufous-brown with black shaft-streaks; lesser wing-coverts slaty blue; median series blackish, edged with ashy and tipped with creamy buff, forming a narrow wing-bar; greater coverts blackish, edged with pale rufous and slightly tipped with creamy buff; bastard-wing and primary-coverts blackish, edged with ashy grey; quills blackish, the primaries margined with ashy whitish, the secondaries with pale rufous, more broadly on the inner ones, which are pale rufous also on the inner web like the inner greater coverts; middle tail-feathers pale rufous, black in the centre, the remainder blackish, edged with sandy rufous, the penultimate feather with a large wedge-shaped mark of white at the end of the inner web, larger on the outermost feather, which is also margined externally with white; crown of head pale bluish grey, with a broad band of black along either side of the crown; over the eye a streak of ashy white from the base of the forehead to above the ear-coverts; lores and eyelid black, continued into a black streak along the upper margin of the ear-coverts, which are ashy whitish, separated from the throat by a streak of black, which runs behind the ear-coverts and joins the other black line; sides of neck bluish grey, whitish where it touches the black line behind the ear-coverts; throat and chest pale bluish grey; remainder of under surface of body pale cinnamon-rufous, washed with isabelline, including the thighs and under tail-coverts; axillaries and under wing-coverts ashy whitish; quills dusky below, ashy along the inner web; bill dull lead-colour; feet yellowish brown, the toes darker; iris dark brown. Total length 6 inches, culmen 0·45, wing 3·3, tail 2·8, tarsus 0·75.

In the height of the breeding-season, when the plumage becomes abraded, the black bands on the crown and on the sides of the face are very strongly developed, and the corresponding white bands are also more distinctly indicated; the ashy colour of the throat and chest is much paler, the former becoming almost whitish.

Adult female in breeding-plumage. Paler than the adult male, and not having the grey on the head so pure, all being slightly washed with brown; ear-coverts brown, ashy white under the eye; loral stripe and cheek-stripe dull blackish and not so distinct as in the male; throat and chest very pale bluish ashy, slightly washed with brown; remainder of under surface of body very pale cinnamon-rufous, distinctly isabelline on the abdomen, thighs, and under tail-coverts. Total length 6 inches, culmen 0·45, wing 3·05, tail 2·75, tarsus 0·7.

Mr. Seebohm's collection contains two females which can scarcely be distinguished from adult males, and have the facial markings equally well developed.

Young. Pale yellowish buff, all the feathers mesially streaked with black; the wing-coverts blackish, broadly edged with yellowish buff; wings and tail as in adults; head yellowish buff like the back and streaked in the same manner; sides of face and under surface of body yellowish buff, inclining to creamy white on the abdomen; the ear-coverts with a brown streak along the upper margin; the cheeks, throat, and breast spotted with triangular marks of blackish, a little more longitudinal on the sides of the body and flanks.

Young males in their first winter plumage have the head like the back, with only a slight ashy tinge on the crown; the black facial markings obscured by ashy-brown tips to the feathers, the white eyebrow and ear-coverts also washed with brown; under surface of body much paler than in the adults, with tiny dusky spots on the throat and breast. These small spots seem to be an unfailing character of the young bird, and they are also found in the *young female*, which in its first winter plumage can scarcely be distinguished from the young male of a similar age.

Hab. Southern Europe, across Persia to Afghanistan.

a. ♂ ad. sk.	Europe.	Gould Coll.
b. ♂ ad. sk.	France.	Hume Coll.
c. ♂ ad. sk.	Bordeaux, France.	India Museum.
d. Ad. sk.	Valencia, Spain.	Hume Coll.
e. ♀ ad. sk.	Valencia, Dec. 20, 1871 (*H. Saunders*).	Hume Coll.
f. ♂ ad. sk.	Malaga, May 23, 1869 (*H. Saunders*).	Hume Coll.
g. ♂ ad. sk.	Gibraltar, Feb. 10 (*L. H. Irby*).	Hume Coll.
h. ♂ ad. sk.	Rome, Italy (*P. L. Sclater*).	India Museum.
i. ♂ ad. sk.	Macedonia, Feb. 17 (*H. J. Elwes*).	Salvin-Godman Coll.
k, l. ♂ ♀ ad. sk.	Buyukdere, Turkey, Dec. (*T. Robson*).	R. B. Sharpe, Esq. [P.].
m. ♂ ad. sk.	Turkey, March (*T. Robson*).	Gould Coll.
n. ♂ ad. sk.	Near Constantinople, Nov. 10 (*W. Pearce*).	R. B. Sharpe, Esq. [P.].
o. ♂ ad. sk.	Aiden, Asia Minor, Dec. 16, 1879 (*Schrader*).	R. B. Sharpe, Esq. [P.].
p. Juv. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll.
q. ♂ ad. sk.	Trebizond (*Dickson & Ross*).	Gould Coll.
r. ♂ ad. sk.	Pass of Afka, Lebanon.	Canon Tristram [C.].
s. Juv. sk.	Persia (*W. T. Blanford*).	Hume Coll.
t. ♀ ad. sk.; *u.* ♂ juv. sk.	Pass to Anan, Elburz Mountains, N. Persia, Aug. 11.	W. T. Blanford, Esq. [C.].
v. ♂; *w, x.* ♀ ad. sk.	Pushut, Afghanistan (*Griffith*).	India Museum.

Subsp. *a.* Emberiza stracheyi.

Enspiza cia (*nec L.*), *Blyth, Cat. B. Mus. As. Soc.* p. 131 (1849).

Emberiza stracheyi, *Moore, P. Z. S.* 1855, p. 215, pl. 112; *Horsf. & Moore, Cat. B. E. I. Co. Mus.* ii. p. 483 (1856); *Jerd. B. Ind.* ii. p. 372 (1863); *Brooks, Str. F.* 1875, p. 254; *Hume, Str. F.* 1879, p. 107; *Wardlaw Ramsay, Ibis,* 1880, p. 65; *Biddulph, Ibis,* 1881, p. 79; *Scully, t. c.* p. 574; *Salv. Cat. Strickl. Coll.* p. 236 (1882); *Marshall, Ibis,* 1884, p. 419.

Buscarla stracheyi, *Bp. Rev. et Mag. de Zool.* 1857, p. 162.

Emberiza cia (*nec L.*), *Jerd. B. Ind.* ii. p. 371 (1863); *Beavan, Ibis*, 1868, p. 175; *Pelz. Ibis*, 1868, p. 318; *Blyth, t. c.* p. 354; *Wald. Ibis*, 1869, p. 213; *Brooks, t. c.* p. 458; *Hume & Henders. Lahore to Yark.* p. 256 (1873); *Cock & Marsh. Stray Feath.* 1873, p. 357.
Citrinella stracheyi, *Gray, Hand-l. B.* ii. p. 114, no. 7699 (1870).

Adult male. Similar to *E. cia*, but with the facial markings and eyebrow whiter, and distinguished by the pale rufous tips to the median wing-coverts, so that there is no white wing-bar: "bill dark brown or black, the base of the lower mandible bluish; legs and feet fleshy yellow or fleshy brownish, the claws dusky (*A. O. Hume*); "iris dark brown" (*W. Davison*). Total length 6·1 inches, culmen 0·5, wing 3·1, tail 2·85, tarsus 0·7.

The plumages of the female, young birds, and winter season correspond with those of *E. cia*.

Adult male in winter. "Upper mandible brown, lower mandible pale plumbeous; tarsi and feet yellowish fleshy, the latter tinged with brown on the joints; iris deep brown. Length 7 inches, wing 3·41, tail 3·3, tarsus 0·78." (*W. Davison.*)

Young male. "Bill dark brown, dusky yellow on the lower mandible; legs and feet fleshy yellow, or yellow with the joints brownish." (*A. O. Hume.*)

E. stracheyi is only a dark-coloured race of *E. cia*, and in some examples can scarcely be distinguished from the latter species. This is especially the case with one from Gilgit, presented by Dr. Scully, where there is a slight trace of whitish ends to the median wing-coverts.

Hab. From Eastern Baluchistan and Cashmere eastwards to Kumaon; wintering slightly to the southward.

a. ♀ juv. sk.	Forest near Kowar, Khelat, June 19, 1881 (*Sir O. St. John*).	Hume Coll.
b, c. ♂ ad. sk.	Gilgit, Feb. 1879.	Dr. J. Scully [P.].
d. ♂ ad. sk.	Gilgit, Feb. 7, 1878 (*J. Biddulph*).	Hume Coll.
e. ♂ ad. sk.	Gilgit, March 18, 1879 (*J. Biddulph*).	Hume Coll.
f. ♂ ad. sk.	Gilgit, Dec. 1878 (*J. Biddulph*).	Hume Coll.
g. ♂ juv. sk.	Valley of Astor, Cashmere, Sept.	R. B. Sharpe, Esq. [P.].
h. ♂ ad. sk.	Cashmere.	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Gulmurg, Cashmere, July (*T. C. Jerdon*).	Hume Coll.
k, l. ♀ ad. sk.	Dhurmsala, April 1870 (*W. E. Brooks*).	Hume Coll.
m. ♂ ad. sk.	Dhurmsala, May 1870 (*W. E. Brooks*).	Hume Coll.
n. ♀ ad. sk.	Near Hirpore, May 13, 1871 (*W. E. Brooks*).	Hume Coll.
o. ♂ ad. sk.	Ruttum Pir, May 10, 1871 (*W. E. Brooks*).	Hume Coll.
p. ♀ ad. sk.	Between Aliabad and Hirpore, May 13, 1871 (*W. E. Brooks*).	Hume Coll.

q, *r*. ♂ ♀ ad. sk.	Posiana, May 11, 1871 (*W. E. Brooks*).	Hume Coll.
s. Ad. sk.	Cashmere, Sept. (*W. E. Brooks*).	Hume Coll.
t, *u*. ♂ ad.; *v*. Juv. sk.	Dhurmsala.	Capt. Stackhouse Pinwill [P.].
w. ♂ ad. sk.	Murree, Aug. 1877.	Colonel Way [P.].
x. Ad. sk.	Murree, Aug. 8, 1870.	Hume Coll.
y. Juv. sk.	Murree, Sept. 11, 1868 (*C. H. T. Marshall*).	Hume Coll.
z–*a'*. ♂ ad.; *b'*. Juv. sk.	Kotegurh.	Hume Coll.
c'. Ad. sk.	Kotegurh, May 21, 1869.	Hume Coll.
d', *e'*. Imm. sk.	Kotegurh, Dec. 28, 1870.	Hume Coll.
f', *g'*. Imm. sk.	Dulsar, Kotekhaie, Feb. 23, 1871.	Hume Coll.
h', *i'*. ♂ ad. sk.	Simla, March 1868 (*A. O. H.*).	Hume Coll.
k'. ♀ ad. sk.	Simla, March 11, 1878 (*T. J. Thompson*).	Hume Coll.
l', *m'*, *n'*. ♂ ad. sk.	Simla, July 1868 (*A. O. H.*).	Hume Coll.
o'. ♂ ad. sk.	Simla, July 17, 1876 (*W. Davison*).	Hume Coll.
p'. ♂ ad.; *q'*, *r'*. ♂ juv. sk.	Simla, Aug. 30, 1868 (*A. O. H.*).	Hume Coll.
s', *t'*. ♀ juv. sk.	Simla, Sept. 1868 (*A. O. H.*).	Hume Coll.
u', *v'*. ♂; *w'*. ♀ ad.; *x'*. ♀ juv. sk.	Simla, Sept. 1880 (*W. Davison*)	Hume Coll.
y', *z'*. ♂ ad. sk.	Simla, Oct. 1880 (*W. Davison*).	Hume Coll.
a–*η*. ♂ ad.; *θ*, *ι*, *κ*. ♀ ad.; λ, *μ*, *ν*. ♂, *ξ*. ♀ juv. sk.	Simla, Nov. 1880 (*W. Davison*).	Hume Coll.
o. ♂ ad. sk.	Simla, Dec. 6, 1880 (*W. Davison*).	Hume Coll.
π. Var. alb. sk.	Near Simla.	Hume Coll.
ρ. ♂ ad. sk.	Mahasoo, near Simla, July 26, 1868 (*A. O. H.*).	Hume Coll.
σ. ♂ juv. sk.	Mahasoo, near Simla, Aug. 8, 1868 (*A. O. H.*).	Hume Coll.
τ. ♂ ad. sk.	Fagoo, near Simla, July 28, 1868 (*A. O. H.*).	Hume Coll.
υ. ♀ ad. sk.	Chini, July 1, 1844.	Gould Coll.
φ. Ad. sk.	Road from Simla to Chini (*Buck*).	Hume Coll.
χ. Ad. sk.	Middle range of hills north of Masuri.	Hume Coll.
ψ, *ω*. Ad. sk.	Masuri.	Hume Coll.
α'. ♀ ad. sk.	Masuri, winter 1869.	Hume Coll.
β'–*γ'*. ♂ ad. et juv. sk.	Jerripani, Masuri.	Hume Coll.
δ'. ♂ ad. sk.	Derali, May 13, 1874 (*W. E. Brooks*).	Hume Coll.
ε'. ♂ ad. sk.	Kumaon (*Strachey*).	India Museum.
ζ', *η'*. ♂ ad.; *θ*. ♀ ad. sk.	Kumaon (*Strachey*).	India Museum. (Types of species.)
ι', *κ'*. Juv. sk.	Kumaon (*Strachey*).	India Museum.
λ', *μ'*. Ad. sk.	N.W. Himalayas.	Gould Coll.
ν', *ξ'*. ♂ ♀ imm. sk.	Bhawulpur, Jan. 30, 1868 (*C. H. T. Marshall*).	Hume Coll.
o'. ♂ d. sk.	Bhawulpur, Feb. 5, 1868 (*C. H. T. Marshall*).	Hume Coll.
π', *ρ'*. ♂ ♀ ad. sk.	Mutiana, June 1870 (*A. O. H.*).	Hume Coll.

28. Emberiza godlewskii. (Plate XII.)

Emberiza gigliolii (*nec Swinh.*), *Dybowski, J. f. O.* 1873, p. 88.
Emberiza godlewskii, *Tacz. J. f. O.* 1874, p. 330; *id. Bull. Soc. Zool. France*, i. p. 175 (1876); *Prjev. in Dawson Rowley's Orn. Misc.* ii. p. 308 (1877).

Adult male. General colour above rufescent, with broad black centres and ashy-fulvous margins to the feathers of the mantle and upper back; the scapulars conspicuously chestnut, the lower ones with black centres; lower back, rump, and upper tail-coverts cinnamon-rufous, with ashy edges to the feathers, especially the upper tail-coverts, the long ones of which have black centres; lesser wing-coverts bluish grey; median series black, tipped with creamy white, forming a wing-bar; greater coverts black, externally rufous-brown, whitish towards the end: bastard-wing and primary-coverts black, fringed with ashy; quills blackish, edged with rufous-brown, broader on the inner secondaries, which are pale rufous, with black centres like the inner greater coverts and centre tail-feathers; remainder of tail-feathers black, with a large wedge-shaped mark of white on the two outer feathers, larger on the outer one, which is also externally edged with white; head and neck bluish grey, the latter washed with chestnut-brown; on each side of the crown a band of deep chestnut-brown; a broad eyebrow of bluish grey; lores black; eyelid ashy white; sides of face and ear-coverts bluish ashy, with a broad streak of chestnut-brown along the upper margin, as well as a band behind the ear-coverts, joining a cheek-stripe of blackish, washed with chestnut; cheeks, throat, fore neck, and sides of neck bluish grey; remainder of under surface of body pale cinnamon, paler in the centre of the abdomen; axillaries and under wing-coverts ashy white, with dusky bases; quills dusky below, ashy along the inner web. Total length 6·5 inches, culmen 0·45, wing 3·3, tail 3·15, tarsus 0·7.

Hab. Eastern Siberia, extending to Alashan and Kansu, Yarkand, Turkestan, and Northern Cashmere.

a. Ad. st.	Siberia.	Purchased.
b. ♂ ad. sk.	Kultuk, Lake Baikal, Oct. 22.	Purchased.
c, d. ♂ ad. et juv. sk.	Kirog Valley, March 24, 1874 (*J. Biddulph*).	Hume Coll.

29. Emberiza cioides.

Emberiza cia (*nec L.*), *Pall. Zoogr. Rosso-Asiat.* ii. p. 39 (1811).
Emberiza cioides, *Brandt, Bud. Acad. Sci. St. Pétersb.* i. p. 363 (1843); *Bp. Consp.* i. p. 466 (1850); *Middend. Sibir. Reis.* p. 280 (1851); *Schrenck, Reis. Amurl.* p. 140 (1859); *Radde, Reis. Sibir.* p. 176 (1863); *Vian, Rev. et Mag. de Zool.* 1871–72, p. 38; *Dybowski, J. f. O.* 1873, p. 87; *Seebohm, Ibis*, 1879, p. 38, 1880, p. 188.
Buscarla cioides, *Bp. Rev. et Mag. de Zool.* 1857, p. 162.
Citrinella cioides, *Gray, Hand-l. B.* ii. p. 114, no. 7702 (1870).

Adult male in breeding-plumage. General colour above chestnut,

with narrow black shaft-lines to the feathers of the upper back and mantle; the scapulars, lower back, rump, and upper tail-coverts uniform; lesser wing-coverts bluish grey; median and greater series chestnut, blackish on the inner web, and narrowly edged with ashy whitish; bastard-wing and primary-coverts dusky, edged with pale brown; quills dusky, the primaries margined with ashy white, the secondaries with pale chestnut, broader on the inner ones; centre tail-feathers pale chestnut, blackish along the centre, the remainder blackish, the two outer ones margined externally with white, the penultimate one having a large wedge-shaped mark of white towards the end of the inner web, the outer feather almost entirely white excepting the shaft, an oblique black mark along the base of the inner web and a small blackish mark near the end of the outer web; crown of head and nape deep chestnut, darker than the back; lores and base of forehead blackish; over the eye a distinct line of white from above the lores to the sides of the nape, where it is tinged with grey, like the sides of the neck; ear-coverts deep chestnut; below the eye a broad streak of white; cheeks black, tinged with chestnut anteriorly; behind the cheek-stripe a white spot on the sides of the neck; at base of chin a tiny spot of black; throat greyish white, followed by a broad band of deep chestnut across the chest; sides of breast and flanks paler chestnut, deeper again on the flanks; centre of the breast and abdomen, as well as the thighs and under tail-coverts, ashy whitish; axillaries and under wing-coverts greyish white; quills dusky below, ashy along the inner webs. Total length 6·6 inches, culmen 0·45, wing 3·3, tail 3·1, tarsus 0·75.

Adult female in breeding-plumage. Not so richly coloured as the male, and having broader black stripes to the upper surface; the chestnut breast-band paler. Total length 6 inches, culmen 0·45, wing 3, tail 2·85, tarsus 0·7. (*Mus. H. Seebohm.*)

The *winter plumage of the adult male* differs from the summer plumage in having the chestnut of the upper surface obscured by sandy margins to the feathers, the head and ear-coverts being also washed with sandy; the chestnut edges to the wing-coverts and quills broader and more distinct; the sides of the neck and throat bluish grey; the chest-band obscured by bluish-grey margins to the feathers; otherwise as in summer.

The *adult female in winter plumage* differs from the male in being much more ashy, especially on the head, which is streaked with black like the back; the chestnut band on the fore neck, which is always less distinct in the female than in the male, is entirely hidden in the winter plumage by the ashy-fulvous margins to the feathers.

Young males in winter plumage closely resemble the old females and have the head similarly striped. Like the latter, they lack the black chin-spot.

Nestling. Similar to that of *E. cia*, but more rufous on the wings, rump, and upper tail-coverts, and especially on the central tail-feathers.

Hab. Siberia.

a. Ad. sk.	Siberia.	Purchased.
b. ♀ ad. sk.	Krasnoyarsk, Feb. 1.	H. Seebohm, Esq. [P.].
c, *d*, *e*. ♂; *f*. ♀ ad. sk.	Krasnoyarsk, Dec.	H. Seebohm, Esq. [P.].
g. ♂ ad. sk.	Krasnoyarsk, June 17.	H. Seebohm, Esq. [P.].

30. Emberiza castaneiceps.

Emberiza castaneiceps, *Moore*, *P. Z. S.* 1855, p. 215; *Horsf. & Moore*, *Cat. B. E.I. Co. Mus.* ii. p. 484 (1856); *Swinh. Ibis*, 1861, p. 389.
Buscarla castaneiceps, *Bp. Rev. et Mag. de Zool.* 1857, p. 162.
Emberiza gigliolii, *Swinh. Ibis*, 1867, p. 393.
Emberiza rustica (*nec Pall.*), *Swinh. Ibis*, 1861, p. 255, 1863, p. 87.
Citrinella castaneiceps, *Gray*, *Hand-l. B.* ii. p. 114, no. 7703 (1878).
Emberiza ciopsis (*nec Bp.*), *Swinh. P. Z. S.* 1871, p. 388; *Prjev. in Rowley's Orn. Misc.* ii. p. 308 (1877); *Seebohm*, *Ibis*, 1884, p. 266.
Emberiza cioides (*nec Brandt*), *Tacz. Bull. Soc. Zool. France*, i. p. 175 (1876), iii. p. 137 (1878); *David & Oust. Ois. Chine*, p. 328 (1877); *Sclater*, *Ibis*, 1882, p. 435.
Emberiza cioides, subsp. gigliolii, *Seebohm*, *Ibis*, 1879, p. 38.

Adult male. Similar to *E. cioides* but smaller, and wanting the tiny black spot on the chin, and with much less white on the outer tail-feathers: "upper mandible bluish black, the lower one pale bluish; legs light clay-colour, with blackish claws; iris hazel" (*R. Swinhoe*). Total length 5·5 inches, culmen 0·45, wing 2·9, tail 2·7, tarsus 0·75.

Hab. China and Mongolia, extending to Eastern Siberia.

a. Ad. sk.	China.	India Museum. (Type of species.)
b. Ad. sk.	China.	Gould Coll.
c. ♂ ad. sk.	Kintang, March (*Capt. Ince*).	Gould Coll.
d. ♂ ad. sk.	Ichang Gorge, River Yangtze.	C. Maries, Esq. [C.].
e. ♀ ad. sk.	Amoy, June 1886 (*R. S.*).	Seebohm Coll.
f. Ad. sk.	Kiukiang, March 15.	F. W. Styan, Esq. [P.].
g. ♂ ad. sk.	Hunchan, Manchuria.	H. M. James, Esq. [P.].

31. Emberiza ciopsis.

Emberiza cioides (*nec Brandt*), *Temm. & Schl. Faun. Jap.* p. 59, pl. 58 (1850).
Emberiza ciopsis, *Bp. Consp.* i. p. 466 (1850); *Horsf. & Moore*, *Cat. B. E.I. Co. Mus.* ii. p. 483 (1854); *Swinh. Ibis*, 1874, p. 161; *Blakist. Ibis*, 1862, p. 328; *Whitely*, *Ibis*, 1867, p. 202; *Swinh. Ibis*, 1874, p. 161; *Blakist. & Pryer*, *Ibis*, 1878, p. 242; *Seebohm*, *Ibis*, 1879, p. 38; *Blakist. & Pryer*, *B. Japan*, p. 168 (1882); *Blakist. Amended List B. Japan*, pp. 17, 60 (1884).
Buscarla ciopsis, *Bp. Rev. et Mag. de Zool.* 1857, p. 162.
Citrinella ciopsis, *Gray*, *Hand-l. B.* ii. p. 114, no. 7704 (1870).

Adult male in breeding-plumage. General colour above bright chestnut, narrowly streaked with black on the mantle and upper back; scapulars, lower back, rump, and upper tail-coverts uniform bright chestnut; hind neck also uniform, and slightly tinged with ashy; lesser wing-coverts slaty grey; median and greater coverts

bright chestnut, with black bases, tipped with ashy fulvous; bastard-wing and primary-coverts dusky brown, fringed with ashy; quills dusky brown, the primaries edged with ashy white, the secondaries with bright chestnut; centre tail-feathers bright chestnut, with dusky centres, the remainder blackish, fringed externally with brown, the two outer ones edged with white, the penultimate one with a large wedge-shaped mark of white near the end of the inner web, the outer feather almost entirely white, excepting an oblique blackish mark at the base of the inner web, the shaft, and a small dilatation of the latter near the end of the outer web; head and nape deep chestnut, washed with ashy grey on the base of the forehead; a broad eyebrow of ashy white from the nostrils to the sides of the nape; lores, eyelid, and ear-coverts black, separated from the cheeks, which are also black, by a broad white band below the eye; sides of neck bluish grey, whitish behind the black ear-coverts; throat ashy white; remainder of under surface of body pale cinnamon-rufous, paler on the breast, flanks, and under tail-coverts; abdomen isabelline; the throat separated from the breast by a narrow collar of black; under wing-coverts and axillaries ashy white; quills dusky below, ashy along the inner web: "bill bluish horn-colour; feet brownish flesh-colour; iris dark hazel" (*H. Whitely*). Total length 6·2 inches, culmen 0·45, wing 2·9, tail 2·7, tarsus 0·75.

Adult female. Differs from the male in being paler in colour and browner above, with broader black centres to the feathers of the mantle and upper back; crown ashy grey in the centre; ear-coverts chestnut-brown; cheek-stripe blackish, but not so distinct as in the male; under surface of body paler than in the male, the throat ashy whitish. Total length 5·7 inches, culmen 0·5, wing 2·7, tail 2·55, tarsus 0·8.

The female is very like that of *E. cioides*, and has the same chestnut ear-coverts, but it is not so white on the breast and abdomen.

Hab. Japan.

a. ♀ ad. sk.	Japan.	Gould Coll.
b, c. ♂ ♀ ad. sk.	Japan.	India Museum.
d, e. ♂ ♀ ad. sk.	Yokohama, Japan.	Prof. Milne [C.].
f, g. ♂ ad. et juv. sk.	Hakodadi, Oct.	H. Whitely [C.].
h. ♂ ad. sk.	Hakodadi, April 15 (*H. Whitely*).	Gould Coll.
i. ♂ ad. sk.	Hakodadi, May 5 (*H. Whitely*).	Gould Coll.
k. ♂ ad. sk.	Nagasaki.	Gould Coll.
l, m. ♂ ad. sk.	Nagasaki.	F. Ringer, Esq. [P.].
n, o. ♂; *p, q*. ♀ ad. sk.	Nagasaki, Nov.	F. Ringer, Esq. [P.].
r. ♀ ad. sk.	Nagasaki, Dec.	F. Ringer, Esq. [P.].
s. ♀ ad. sk.	Nagasaki, March.	F. Ringer, Esq. [P.].

32. Emberiza tristrami.

Emberiza stracheyi (*nec Moore*), *Swinh. P. Z. S.* 1862, p. 318, 1863, p. 301; *id. Ibis*, 1865, p. 95.

Emberiza tristrami, *Swinh. P. Z. S.* 1870, p. 441, 1871, p. 388; *id. Ibis*, 1875, p. 122; *Dyb. J. f. O.* 1875, p. 252; *Tacz. Bull. Soc. Zool. France*, i. p. 176 (1876); *David & Oust. Ois. Chine*, p. 326 (1877); *Tacz. Bull. Soc. Zool. France*, iv. p. 138 (1879).
Emberiza quinquelineata, *A. David, MSS. in Mus. Paris*; *Dybowski, J. f. O.* 1874, pp. 323, 335.

Adult male. General colour above ashy olive-brown, the feathers of the mantle and upper back centred with black and washed with chestnut; lower back, rump, and upper tail-coverts uniform pale chestnut; lesser wing-coverts uniform ashy olive; median and greater coverts dusky brown tipped with creamy buff, forming a double wing-bar; the inner greater coverts externally pale rufous; bastard-wing and primary-coverts dusky brown, edged with ashy olive; quills dusky brown, externally edged with pale rufous, broader on the secondaries, the innermost of which are pale rufous, with a subterminal mark of dusky brown, with another dusky spot near the base of the inner web; centre tail-feathers reddish brown, all the remainder dusky brown, edged with reddish brown, the outer feather with an oblique mark of white extending across the inner web; the penultimate feather with an obsolete white mark; head black, with a white mark along the centre of the crown, followed by a distinct superciliary line of white; lores, feathers round eye, and ear-coverts black; cheeks white, forming a broad band; throat black; hind neck and sides of neck ashy olive-brown; fore neck and chest rufous, with a tinge of chestnut; breast and abdomen white; sides of body and flanks fulvescent or sandy buff, with mesial streaks of chestnut; thighs ashy brown; under tail-coverts white, the longer ones centred with ochreous brown at the ends; under wing-coverts and axillaries white, those near the edge of the wing dusky; quills below dusky, ashy whitish along the inner edge: "bill brown, the base of the lower mandible lighter; feet reddish grey" (*A. David*); "iris dusky brown" (*Dybowski*). Total length 5·5 inches, culmen 0·45, wing 2·8, tail 2·2, tarsus 0·65. (*Mus. Henry Seebohm.*)

Adult male in winter plumage (type of species). Similar to the summer plumage, but having the feathers of the throat and ear-coverts obscured by sandy buff edges; the white bands on the head also washed with sandy buff. Total length 5 inches, culmen 0·45, wing 2·75, tail 2·2, tarsus 0·65. (*Mus. Henry Seebohm.*)

A specimen from Ningpo, shot in March, and considered by the late Consul Swinhoe to be the *adult female*, does not differ from the male. Total length 5·5 inches, culmen 0·45, wing 2·8, tail 2·25, tarsus 0·7 (*Mus. Henry Seebohm*). I cannot help thinking that this is a mistake, for Mr. Seebohm has a female, obtained in Eastern Siberia by Dybowski in June, which differs from the adult male in having the ear-coverts brown and the throat white, slightly washed with rufous, and separated from the cheeks by a malar line of dusky blackish. The general tone of coloration is paler. Total length 5·4 inches, culmen 0·45, wing 2·6, tail 2·1, tarsus 0·7.

A *young female* bird in Mr. Seebohm's collection is still paler than

the bird last described, and has the fore neck, chest, and sides of the body pale ochreous buff, with reddish-brown streaks.

Hab. China.

a. Ad. sk. China (*R. Swinhoe*). Gould Coll.

33. Emberiza stewarti.

Emberiza stewarti, *Blyth, J. A. S. Beng.* xxiii. p. 215 (Feb. 1854).
Emberiza caniceps, *Gould, B. Asia,* v. pl. 6 (1854); *Severtz. Turkest. Jevotn.* p. 64 (1873).
Emberiza stewarti, *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 485 (1856); *Jerd. B. Ind.* ii. p. 374 (1863); *Pelz. Ibis,* 1868, p. 318; *Hume, Ibis,* 1870, p. 400; *Cock & Marsh. Str. F.* 1873, p. 357; *Dresser, Ibis,* 1875, p. 248; *Murray, Str. F.* 1878, p. 112; *Hume, Str. F.* 1879, p. 107; *Butler, Cat. B. Sind etc.* p. 47 (1879); *Wardlaw Ramsay, Ibis,* 1879, p. 446, 1880, p. 65; *Barnes, Str. F.* 1880, p. 456; *Biddulph, Ibis,* 1881, p. 81; *Scully, t. c.* p. 575; *Salv. Cat. Strickl. Coll.* p. 236 (1882); *C. Swinh. Ibis,* 1882, p. 113; *Biddulph, t. c.* p. 282; *Marshall, Ibis,* 1884, p. 419; *Murray, Vertebr. Zool. Sind,* p. 185 (1884).
Buscarla buchanani (*nec Blyth*), *Bp. Rev. et Mag. de Zool.* 1857, p. 162.
Citrinella stewarti, *Gray, Hand-l. B.* ii. p. 114, no. 7706 (1870); *Hume, Nests and Eggs Ind. B.* p. 465 (1873).

Adult male. General colour above chestnut, with a few remains of black centres to some of the mantle-feathers; lesser wing-coverts like the back, edged with ashy; median and greater coverts dusky brown, edged with rufous, slightly fulvescent at the ends; bastard-wing, primary-coverts, and primaries dusky brown, narrowly edged with paler brown, the secondaries with rufous; tail-feathers blackish brown, edged with pale brown, the penultimate one with a large wedge-shaped mark of white near the end of the inner web; the outer feather almost entirely white, excepting an oblique mark of blackish brown near the base of the inner web, the shaft and a mark near the end of the outer web, which are dusky brown; crown of head pearly grey, bordered on each side by a black band running from the base of the bill to the side of the nape; lores, feathers below the eye, and ear-coverts whitish, forming a broad facial band; cheeks and throat black; lower throat and fore neck ashy white, succeeded by a broad band of deep chestnut; abdomen isabelline, as also the sides of the body and under tail-coverts, both of which are mottled with chestnut bases, the long under tail-coverts with dusky centres; under wing-coverts and axillaries ashy white with dusky bases; quills dusky below, ashy along the edge of the inner web. Total length 7·6 inches, culmen 0·4, wing 3, tail 2·7, tarsus 0·7.

Adult female. Different from the male. Ashy brown above streaked with blackish centres to the feathers, the head and neck like the back, the scapulars washed with chestnut; lower back, rump, and upper tail-coverts uniform bright chestnut; wings brown,

the median and greater series edged with whitish, the secondaries with rufous; tail as in the male: lores and an indistinct eyebrow dull white, as well as the feathers below the eye; ear-coverts brown; cheeks and under surface of body dull white, with a distinct malar line of black spots; the throat and breast also spotted with dusky, larger on the breast and longitudinal on the flanks and under tail-coverts; axillaries and under wing-coverts white with dusky bases. Total length 5·6 inches, culmen 0·45, wing 2·8, tail 2·6, tarsus 0·65.

In *winter plumage* the male has the grey of the head and the black on the face and throat obscured by ashy brown or sandy margins to the feathers; the whole of the upper surface of the body, as well as the chestnut præpectoral band, is obscured by sandy margins, while the ashy white of the fore neck is washed with bluish grey.

Hab. North-western India, extending into Afghanistan and to Turkestan; once in Scinde.

a. ♂ ad. sk.	Pushut, Afghanistan (*Griffith*).	India Museum.
b. ♂ ad. sk.	Chaman, Afghanistan, April 22.	Col. C. Swinhoe [P.].
c. ♂ ad. sk.	Rungan, Sind Valley, May 22, 1871 (*W. E. Brooks*).	Hume Coll.
d. ♂ ad. sk.	Thibet.	Earl of Gifford [P.].
e. ♂ ad. sk.	Mountains of Cashmere (*Lord A. Hay*).	Gould Coll.
f. ♂ ad. sk.	Cashmere, May 26, 1871.	Hume Coll.
g, *h*, *i*. ♂ ad.; *k*. ♀ juv. sk.	Cashmere, Aug. 1870.	Hume Coll.
l. ♂ ad. sk.	Cashmere (*Dr. Bellew*).	India Museum.
m. ♂ ad. sk.	Murree, July 5, 1872.	Hume Coll.
n. ♂ ad. sk.	Sutlej Valley.	Hume Coll.
o. ♂ ad. sk.	Simla, March 25, 1868.	Hume Coll.
p. ♀ juv. sk.	Masuri, April 8, 1869.	Hume Coll.
q. ♂ ad. sk.	Almora, Nov. 6, 1866.	Hume Coll.
r. ♂ ad. sk.	Dehra Doon, Jan. 25, 1871 (*Dr. G. King*).	Hume Coll.
s. ♂ ad. sk.	Kangra, Punjab.	Capt. Stackhouse Pinwill [P.].
t. ♂ ad. sk.	Sultanpur, Gurgaon, April 9, 1878 (*W. N. Chill*).	Hume Coll.
u, *v*. ♂ ad.; *w*. ♀ ad. sk.	Delhi, April 1876 (*C. T. Bingham*).	Hume Coll.
x, *y*. ♂ ad. sk.	Agrore, April 1870.	Hume Coll.
z–*f'*. ♂ ad; *g'*, *h'*, *i'*. ♀ imm. sk.	Ajmere, Nov. 1869 (*A. O. H.*).	Hume Coll.
k', *l'*. ♀ imm. sk.	Ajmere, Dec. 1869 (*A. O. H.*).	Hume Coll.
m'. ♂ ad. sk.	Ajmere, Nov. 17, 1869 (*A. O. H.*).	Salvin-Godman Coll.
n'. ♀ imm. sk.	Etawah, Dec. 23, 1868 (*A. O. H.*).	Salvin-Godman Coll.
o'. ♂ ad. sk.	Etawah, Dec. 10, 1868.	Hume Coll.

p'. ♂ ad.; *q'*, *r'*, *s'*. ♀ imm. sk.	Etawah, Jan. 1869.	Hume Coll.
t'. ♂ ad. sk.	Etawah, Feb. 7, 1870.	Hume Coll.
u', *v'*. ♂ ♀ ad. sk.	Etawah, April 1, 1869.	Hume Coll.
w', *x'*. ♂ ♀ ad. sk.	India.	Gould Coll.

34. Emberiza leucocephala.

Emberiza leucocephala, *Gm. N. Comm. Acad. Sci. Imp. Petrov.* xv. p. 480, tab. xxiii. fig. 3 (1770); *Salvad. Faun. Ital., Ucc.* p. 141 (1871); *Dresser, B. Eur.* iv. p. 217, pl. 217 (1871); *Swinh. P. Z. S.* 1871, p. 388; *Tacz. J. f. O.* 1873, p. 86; *Dresser, Ibis*, 1875, p. 248; *Tacz. Bull. Soc. Zool France*, i. p. 175 (1876); *David & Oust. Ois. Chine*, p. 329 (1877); *Seebohm, Ibis*, 1878, p. 340; *Finsch, Verh. z.-b. Gesellsch. Wien*, xxix. p. 215 (1879); *Hume, Str. F.* 1879, p. 107; *Tacz. Bull. Soc. Zool. France*, iv. p. 137 (1879); *Biddulph, Ibis*, 1881, p. 79; *Giglioli, t. c.* p. 202; *Scully, t. c.* p. 574; *C. Swinh. Ibis*, 1882, p. 113; *Biddulph, t. c.* p. 282; *Severtz. Ibis*, 1883, p. 60; *Giglioli, Avif. Ital.* p. 51 (1886); *Salvad. Elench. Ucc. Ital.* p. 165 (1887).

Emberiza pityornis, *Pall. Reis. Russ. Reichs*, ii. Anhang, p. 710 (1773).

Pine Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 203 (1783).

Emberiza pithyornus, *Gm. Syst. Nat.* i. p. 875 (1788); *Pall. Zoogr. Rosso-Asiat.* ii. p. 37 (1811); *Temm. Man. d'Orn.* i. p. 310 (1820); *Naum. Vög. Deutschl.* iv. pl. 104 (1824); *Werner, Atlas, Granivores*, pl. 22 (1827); *Gould, B. Eur.* iii. pl. 180 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 36 (1838); *Keys. u. Blas. Wirb. Eur.* p. xxxix (1840); *Schl. Rev. Crit.* p. lxx (1844); *Gray, Gen. B.* ii. p. 377 (1844); *Bp. Consp.* i. p. 466 (1850); *Cab. Mus. Hein.* Th. i. p. 128 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. ii. p. 482 (1856); *Jaub. Rev. et Mag. de Zool.* 1855, p. 320; *id. & Barth.-Lapomm. Rich. Orn.* p. 157, cum tab. (1859); *Schrenck, Reis. Amurl.* p. 279 (1859); *Radde, Reis. Sibir., Vög.* ii. p. 177 (1863); *Jerd. B. Ind.* ii. p. 370 (1863); *Swinh. Ibis*, 1863, p. 95; *Bree, B. Eur.* ii. p. 35 (1864); *Degl. et Gerbe, Orn. Eur.* i. p. 314 (1867); *Blyth, Ibis*, 1868, p. 355; *Dybowski, J. f. O.* 1868, p. 335; *von Tschusi, J. f. O.* 1869, p. 217; *Fritsch, Vög. Eur.* tab. 20. figs. 7, 15 (1870); *Elwes & Buckley, Ibis*, 1870, p. 194; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Lilford, Ibis*, 1875, p. 6; *Prjev. in Rowley's Orn. Misc.* ii. p. 307 (1877); *Homeyer & Tancré, MT. orn. Ver. Wien*, 1883, p. 90.

Emberiza rustica (*nec Pall.*), *Durazzo, Descr. Genov.* i. pt. 2*a*, tab. 6. fig. 1 (♀, 1846, *teste Salvad.*).

Emberiza esclavonicus, *Degl. Orn. Eur.* i. p. 252 (1849).

Emberiza albida, *Blyth, J. A. S. Beng.* xviii. pt. 2, p. 811 (1849); *id. Cat. B. Mus. As. Soc.* p. 128 (1849); *Bp. Consp.* i. p. 465 (1850).

Emberiza sclavonica, *Midd. Sibir. Reis.* p. 140 (1851).

Buscarla pityornis, *Bp. Rev. et Mag. de Zool.* 1857, p. 164.

Emberiza bonapartii, *Barth. MSS.*; *Bp. Rev. et Mag. de Zool.* 1857, p. 164.

Emberiza himalayensis, *Tytler, Ibis*, 1868, p. 201.

Citrinella pityornus, *Gray, Hand-l. B.* ii. p. 114, no. 7700 (1870).

Citrinella albida, *Gray, Hand-l. B.* ii. p. 114, no. 7707 (1870).

Adult male in breeding-plumage. General colour above cinnamon-rufous or pale chestnut, the mantle and upper back streaked with black centres to the feathers; the hind neck and sides of neck, lower back, rump, and upper tail-coverts uniform rufous; lesser wing-coverts ashy grey; median coverts rufous, with whitish margins and black bases; greater coverts blackish, edged with whity brown, whitish at the tips; bastard-wing and primary-coverts blackish; quills blackish, edged with ashy white, the secondaries with brown, the innermost externally rufous like the back; tail-feathers blackish, edged with whity brown, the penultimate one with a large wedge-shaped mark of white at the end of the inner web, this mark much larger on the outer feather, which is also margined with white externally; centre of crown pure white, the sides of the crown black along each side in the form of a broad band; base of forehead washed with rufous; lores and a broad eyebrow, as well as the feathers round the eye, vinous chestnut; a broad band of white along the sides of the face, running below the eye across the middle of the ear-coverts, above and below the latter being a large black mark; cheeks, throat, and sides of neck rich vinous chestnut, the latter with a crescentic mark of white; on the fore neck a large white collar; chest and sides of body chestnut, the flanks narrowly streaked with black; breast, abdomen, thighs, and under tail-coverts white; axillaries and under wing-coverts white, the latter with dusky bases; quills dusky below, ashy along the inner web; upper mandible dark brown, the lower one yellowish brown; feet pale yellowish; iris dark brown. Total length 6·2 inches, culmen 0·5, wing 3·75, tail 3·15, tarsus 0·75.

Adult male in winter plumage. Has the same coloration as in summer, but entirely obscured by dusky or ashy tips to the feathers; the dorsal feathers margined with sandy buff, the upper tail-coverts with ashy white; the hind neck washed with brown; the white crown obscured with dusky brown tips, the black on the sides of the crown with brown edgings; all the chestnut of the head and throat hidden by sandy-buff tips to the feathers, and on the breast and sides of the body the rufous entirely hidden by sandy edges; the white patch on the fore neck spotted with dusky: "upper mandible very dark brown, the base from nostril to gape yellowish; lower mandible very pale horny bluish; legs yellowish fleshy, the feet slightly tinged with brown" (*W. Davison*); "iris dark brown" (*Dr. G. King*).

Adult female. Very similar to the male above, but has the characteristic markings less pronounced; the white coronal patch hidden by a wash of brown and streaked with black; lesser wing-coverts brown instead of ashy; outer tail-feathers with somewhat less white on the inner web; sides of face and throat ashy whitish, with chestnut bases to the feathers; the band across the ear-coverts dull ashy whitish, with a patch of dark brown above and below; a very distinct malar line of black; on the lower throat a white collar, less distinct than in the male; remainder of underparts white, the chest and sides of the body with concealed chestnut centres to the

feathers, the fore neck streaked and spotted with dusky blackish; under tail-coverts white, with longitudinal black centres; under wing-coverts and axillaries white. Total length 6·5 inches, culmen 0·45, wing 3·45, tail 3·1, tarsus 0·7.

Young in first plumage. Entirely brown above, streaked with broad black centres to the feathers; the head like the back, with a slightly paler shade on the centre of the crown and over the eye; the lower back and rump rather more sandy rufous; the upper tail-coverts chestnut mesially, streaked with black like the centre tail-feathers: tail as in the adult female, but the white wedge-shaped marks on the two outer feathers more elongated; wings as in adult female, but the edges to the wing-coverts more sandy buff; facial markings as in old female, but more dingy and somewhat washed with fulvous; cheeks and throat dull white, streaked with dusky blackish along the malar line; lower throat, fore neck, chest, and under surface of body sandy buff, streaked with blackish; centre of breast, abdomen, and under tail-coverts pure white, the latter with longitudinal mesial streaks of black. (*Mus. H. Seebohm.*)

Young female in first winter. Resembles the foregoing nestling-plumage, but has the chest and throat thickly spotted with black, and the throat with a certain amount of rufous. *Young males in first winter* are much more rufous on the upper surface, have a distinct white facial streak and collar on the fore neck, and the vinous of the throat, face, and eyebrow hidden by sandy-buff tips to the feathers; the head is brown like the nestling, streaked with blackish brown. (*Mus. H. Seebohm.*)

Hab. Siberia, extending southwards in winter. Accidental in Europe.

a. ♂ ad st.	Altai Mountains.	Mr. Brandt.
b. ♂ ad. sk.	[Siberia.]	Gould Coll.
c. ♀ ad. sk.	Siberia.	Gould Coll.
d. ♂ ad. sk.	Krasnoyarsk, April 17.	H. Seebohm, Esq. [P.].
e. ♂ ad. sk.	Kultuk, Lake Baikal, Mar. 23.	Purchased.
f. ♂ ad. sk.	Tashkend, Turkestan, Nov. 20 (*Severtzoff*).	India Museum.
g. ♂ ad. sk.	Marka Kul, Chinese Altai, June 8 (*Dr. O. Finsch*).	Geogr. Soc. Bremen.
h. ♀ ad. sk.	Ab-i-Kamarra, W. Afghanistan, Dec. 7.	Dr. Aitchison [C.].
i. ♂ juv. sk.	Candahar, Jan. 12, 1880 (*Sir O. St. John*).	Hume Coll.
k, l. ♂ ♀ ad. sk.	Candahar, Jan. 2.	Col. Swinhoe [P.].
m, n. ♂ ♀ ad. sk.	Cabul (*Griffith*).	India Museum.
o, p. Imm. sk.	Pushut (*Griffith*).	India Museum.
q. ♀ ad. sk.	Gilgit, Dec. 14, 1878 (*J. Biddulph*).	Hume Coll.
r. ♂; *s, t.* ♀ ad. sk.	Sonamurg, Cashmere, Oct. 1870 (*Dr. G. Henderson*).	Hume Coll.
u. ♂ ad. sk.	Simla, Nov. 11, 1880 (*W. Davison*).	Hume Coll.
v. ♂ ad. sk.	Hills north of Masuri.	Hume Coll.
w. ♂ ad. sk.	Dehra, 1879.	Hume Coll

x. ♂ ad. sk.	Dehra, Feb. 3, 1871 (*Dr. G. King*).	Hume Coll.
y. ♂ ad. sk.	Quetta, Dec. (*Sir O. St. John*).	Hume Coll.
z. ♂ ad. sk.	[Abyssinia.*]	Dr. Rüppell.

54. MILIARIA.

	Type.
Emberiza, *Vieill. Analyse*, p. 30 (1816)	M. miliaria.
Miliaria, *Brehm, Isis*, 1828, p. 1278	M. miliaria.
Spinus, *Kaup* (*nec Boie*), *Natürl. Syst.* p. (1829)	M. miliaria.
Crithophaga, *Cab. Mus. Hein.* Th. i. p. 127 (1850)	M. miliaria.

Range. The same as that of the species.

1. Miliaria miliaria.

The Bunting, *Albin, Nat. Hist. Birds*, ii. pl. 50 (1738).
Le Proyer, *Briss. Orn.* iii. p. 292 (1760).
Emberiza miliaria, *Linn. Syst. Nat.* i. p. 308 (1766); *Bodd. Tabl. Pl. Enl.* p. 14 (1783); *Gm. Syst. Nat.* i. p. 868 (1788); *Pall. Zoogr. Rosso-Asiat.* ii. p. 35 (1811); *Temm. Man. d'Orn.* i. p. 306 (1815); *Koch, Syst. baier. Zool.* p. 209 (1816); *Naum. Vög. Deutschl.* iv. pl. 101. fig. 1 (1824); *Roux, Orn. Prov.* pl. 108 (1825); *Werner, Atlas, Granivores*, pl. 22 (1827); *Ménétr. Cat. rais. Cauc.* p. 40 (1832); *Gould, B. Eur.* iii. pl. 171 (1837); *Macgill. Brit. B.* i. p. 440 (1837); *Crespon, Orn. Gard*, 1840, p. 216; *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 171 (1840); *Selys-Longch. Faun. Belge*, p. 82 (1842); *Yarr. Brit. B.* i. p. 433 (1843); *Schl. Rev. Crit.* p. lxxi (1844); *Von der Mühle, Orn. Griechenl.* p. 42 (1844); *Gray, Gen. B.* ii. p. 377 (1844); *Thomps. B. Irel.* i. p. 241 (1849); *Kjærb. Orn. Dan.* pl. 25. fig. 3 (1852); *Schl. Vog. Nederl.* pl. 153 (1854); *Hewits. Eggs Br. B.* i. p. 186, pl. 47. fig. 3 (1856); *Sundev. Svensk. Fogl.* pl. 6. fig. 3 (1858); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 165 (1859); *Tristr. Ibis*, 1859, p. 34; *Salvin, t. c.* p. 314; *Powys, Ibis*, 1860, p. 138; *Linderm. Vög. Griechenl.* p. 54 (1860); *Schl. Dier. Nederl. Vog.* pl. 15. fig. 1 (1861); *Gray, List Brit. B.* p. 101 (1863); *Wright, Ibis*, 1864, p. 55; *Sperling, t. c.* p. 280; *More, Ibis*, 1865, p. 125; *Tristr. Ibis*, 1867, p. 367; *Drake, t. c.* p. 427; *Smith, Ibis*, 1868, p. 444; *Borggr. Vogelf. Norddeutschl.* p. 72 (1869); *Saunders, Ibis*, 1869, p. 173; *Elwes & Buckley, Ibis*, 1870, p. 194; *Saunders, Ibis*, 1871, p. 217; *Dresser, B. Eur.* iv. p. 163, pl. 208 (1871); *R. Gray, B. W. Scotl.* p. 128 (1871); *Harting, Handb. Brit. B.* p. 26 (1872); *Shelley, B. Egypt*, p. 144 (1872); *Godm. Ibis*, 1872, p. 210; *Brooke, Ibis*, 1873, p. 246; *Severtz. Turkest. Jevotn.* p. 64 (1873); *Durnf. Ibis*, 1874, p. 396; *Dresser, Ibis*, 1875, p. 249; *Danf. & Harvie Brown, Ibis*, 1875, p. 312; *Irby, B. Gibr.* p. 115 (1875); *Fallon, Ois. Belg.* p. 87 (1875); *Bygrave Wharton, Ibis*, 1876, p. 25; *Newt. ed. Yarr. Brit. B.* ii. p. 38 (1876); *Blanf. East. Pers.* ii. p. 257 (1876); *Danf. Ibis*, 1878, p. 21; *Finsch, Verh. z.-b. Gesellsch. Wien*, xxix. p. 102 (1879); *Danf. Ibis*, 1880, p. 84; *Elwes, t. c.* p. 392; *Seebohm, Ibis*, 1880, p. 118; *Dixon, t. c.* p. 574; *Salvin, Cat. Strickl. Coll.* p. 235 (1882); *B. O. U. List Br. B.* p. 59 (1883); *Booth, Rough Notes*, pt. v. no. 3 (1883);

* Doubtless some mistake has occurred with regard to the locality of this specimen.

Seebohm, Hist. Brit. B. ii. p. 148 (1883); *id. Ibis*, 1883, p. 11; *Irby, t. c.* p. 184; *Homeyer & Tancré, MT. orn. Ver.* iii. p. 90 (1883); *Tristr. Faun. & Flor. Palest.* p. 71 (1884); *Chapm. Ibis*, 1884, pp. 67, 95; *Clarke, t. c.* p. 104; *Saunders, t. c.* p. 376; *Dixon, Ibis*, 1885, p. 83; *Whitehead, t. c.* p. 40.

Bruant de France appellé le Proyer, *Daubent. Pl. Enl.* v. pl. 235.

Fringilla projer, *P. L. S. Müll. Natursyst. Suppl.* p. 164 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 254.

Common Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 171 (1783).

Miliaria septentrionalis, *Brehm, Isis*, 1828, p. 1278; *id. Vög. Deutschl.* p. 291 (1831).

Miliaria germana, *Brehm, t. c.* p. 292 (1831).

Miliaria peregrina, *Brehm, t. c.* p. 292 (1831).

Spinus miliaria, *Kaup, Natürl. Syst.* p. 153 (1829); *Gray, List Gen. B.* 1841, p. 61; *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 481 (1854).

Miliaria europæa, *Swains. Classif. B.* ii. p. 290 (1837); *Degl. et Gerbe, Orn. Eur.* i. p. 308 (1867); *Salvad. Faun. Ital., Ucc.* p. 135 (1871); *Bogdanoff, B. Cauc.* p. 70 (1879).

Cynchramus miliaria, *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Bp. Consp.* i. p. 463 (1860); *Filippi, Viagg. Pers.* p. 349 (1865); *Loche, Expl. Sci. Algér., Ois.* i. p. 168 (1867); *Doderl. Avif. Sicil.* p. 86 (1869); *Droste, Vogelw. Borkums*, p. 109 (1869); *Fritsch, Vög. Eur.* tab. 19. fig. 21 (1870).

Crithophaga miliaria, *Cab. Mus. Hein.* Th. i. p. 127 (1850); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 658 (1871); *Gould, B. Gt. Br.* iii. pl. 26 (1873); *Radde, Orn. Cauc.* p. 196 (1884).

Miliaria valida, *Brehm, Vogelf.* p. 111 (1855).

Miliaria meridionalis, *Brehm, t. c.* p. 111 (1855).

Miliaria minor, *Brehm, t. c.* p. 111 (1855).

Citrinella miliaria, *Gray, Hand-l. B.* ii. p. 115, no. 7697 (1870).

Miliaria proier, *Gigl. Iconogr. Avif. Ital.* pl. 186 (1882); *Salvad. Elench. Ucc. Ital.* p. 162 (1887).

Cynchramus miliaria, var. minor, *Radde, Orn. Cauc.* p. 196 (1884).

Nestling. General colour above sandy brown, strongly mottled with black centres to the feathers, which are rather paler sandy buff on their extreme margins; wing-coverts like the back, the tips of the greater and median series rather lighter isabelline buff; bastard-wing and primary-coverts and quills blackish, edged with sandy buff, inclining to isabelline on the first primary and innermost secondaries; tail-feathers brown, edged with sandy buff along the outer web and round the tips of the inner one; head more sandy rufous, mottled with black centres to the feathers, the centre of the crown with a broad streak of sandy rufous; hind neck sandy rufous, more minutely spotted with black like the sides of the neck; lores, feathers round the eye, a narrow eyebrow, sides of face, and ear-coverts sandy rufous, with a few black streaks on the ear-coverts, and having a broad line of black along the upper edge of the cheeks; cheeks, throat, and under surface of body pale sandy rufous, the centre of the breast, abdomen, and under tail-coverts dull white; a few triangular spots of black along the malar line; the fore neck, chest, and sides of the body with larger and more strongly marked spots of black, inclining to streaks on the sides of the body; under wing-coverts and axillaries dull white, washed with sandy rufous, the lower ones mottled with black centres near the edge of the wing.

The female in the nestling plumage differs from the male in being much less spotted and in being less sandy rufous below.

The birds remain in the first plumage till the middle or end of August, when they moult into the winter dress. The latter closely resembles the winter plumage of the adults, but is rather more ruddy below, the spots also much more triangular and presenting a somewhat less streaked appearance.

Adult male in breeding-plumage. General colour above brown, rather more ashy on the mantle and scapulars and especially on the hind neck; all the feathers mottled with black centres and having paler ashy-fulvous margins; lower back and rump brown, the black centres to the feathers less distinct; upper tail-coverts brown, with ashy-fulvous margins and black centres to the feathers; lesser wing-coverts blackish brown, with ashy-fulvous edges; greater and median coverts dusky brown, broadly margined with pale sandy rufous, inclining to whity brown near the ends of the inner coverts of both series; bastard-wing, primary-coverts, and quills dark brown, edged with ashy fulvous, the first primary isabelline along the outer web, the inner secondaries sandy rufous externally, whitish at the tips; tail-feathers brown, edged with ashy fulvous and also fringed with dull ashy white along the edge of the inner web near the tip; head rather more rufous-brown than the back, the feathers mesially streaked with black; lores and an ill-defined superciliary stripe ashy white, the latter streaked with black shaft-lines; ear-coverts reddish brown, streaked with black; sides of neck ashy white, streaked with small shaft-lines of black; cheeks and throat dull white, separated from each other by a broad moustachial line of black spots; the throat with a few small triangular spots of black, larger and more pronounced on the fore neck and breast, which are tinged with pale rufous, especially on the sides of the latter; centre of breast and abdomen uniform dull ashy white, the sides of the body and flanks browner and distinctly streaked with black; thighs ashy white; under tail-coverts pale rufous buff, with dusky blackish centres: axillaries and under wing-coverts light fulvous, with dusky centres to those near the edge of the wing; quills dusky brown below, pale ashy along the edge of the inner web: bill horn-colour with a slight dash of red, the edge of the upper mandible and the whole of the lower one yellow; feet pale fleshy brown; iris dark brown. Total length 7·5 inches, culmen 0·6, wing 3·85, tail 2·75, tarsus 0·95.

Adult female in breeding-plumage. Similar to the male, but smaller. Total length 6·5 inches, culmen 0·55, wing 3·45, tail 2·5, tarsus 0·9.

During the progress of the breeding-season, the plumage gets duller and very much abraded. The wearing off of the margins of the feathers leaves the upper surface much more uniform, the black stripes being very distinct in consequence; underneath, the wearing away of the edges to the feathers of the throat leaves the black spotting very distinct, so that in worn individuals a narrow collar is left on the fore neck, where the black spots coalesce.

Adult male in winter plumage. Much more rufous-brown than in summer, the head like the back, the central black streaks distinctly indicated everywhere; the margins to the wing-coverts and quills much more rufous than in summer; facial markings and under surface of body fulvescent, inclining to creamy buff on the centre of the breast and abdomen; the throat-spots very distinct, as also the black stripes on the sides of the body. Towards the approach of spring the colour on the throat and chest seems to become intensified and to assume a distinct rufescent tint.

Specimens from northern localities appear to be larger than those from southern and eastern habitats; the following are the measurements of some of the birds examined, from which it would seem that no specific distinctions of size can be drawn:—

	Total length. in.	Wing. in.	Tail. in.	Tarsus. in.
a. ♂. South Sweden, May 15 (*Meves*)	7·5	3·85	2·75	0·95
β. ♂. Skåne, Sweden, Feb. 5 (*Meves*)	7·5	3·95	2·9	0·95
γ. ♂. Skåne, Sweden, Nov. 23 (*Meves*)	7·5	3·9	2·75	1·0
δ. ♀. South Sweden, Nov. (*Meves*)	6·5	3·45	2·5	0·9
ε. ♂. Brighton, March 3 (*Swaysland*)	7·7	3·8	2·9	1·0
ζ. ♂. Brighton, Apr. 4 (*Swaysland*)	7·7	3·75	2·65	0·95
η. ♀. Brighton, Apr. 4 (*Swaysland*)	7·0	3·4	2·55	0·85
θ. ♀. Valencia, Spain, Oct. 18 (*Saunders*)	7·5	3·95	2·9	0·9
ι. ♀. El Djen, Tunis, March 1 (*Salvin*)	6·8	3·9	2·75	1·0
κ. ♂. Teneriffe, April 1 (*Godman*)	7·2	3·55	2·75	0·95
λ. ♀. Teneriffe, April 7 (*Godman*)	6·0	3·35	2·5	0·9
μ. Erzeroum (*Dickson and Ross*)	6·9	3·9	2·6	0·95
ν. Trebizond (*Dickson and Ross*)	7·3	3·95	2·7	0·95
ξ. Trebizond (*Dickson and Ross*)	6·7	3·45	2·45	0·9
ο. ♀. Shiraz, June (*Dickson and Ross*)	6·4	3·5	2·5	0·9
π. Persia	7·0	4·0	2·8	1·0

Hab. The greater part of Europe, including the countries to the south of the Mediterranean, and the Canary Islands, extending into Western Persia, and has occurred once in Sind.

a. Ad. sk.	Louth, Ireland, March 13, 1885.	R. B. Sharpe, Esq. [P.].	
b, *c*. Juv. autumn. sk.	England.	Gould Coll.	

d. Ad. sk.	St. David's, Pembrokeshire, Sept.	Dr. Günther [P.].
e. Ad. sk.	Wiltshire.	Col. Montagu [P.].
f. Pull. st.	Brighton, July.	Henry Swaysland [C.].
g. ♂ juv. st.	Brighton, Nov.	R. B. Sharpe, Esq. [P.].
h. ♀ ad. st.	Brighton, Nov.	R. B. Sharpe, Esq. [P.].
i. Juv. sk.	Brighton, Sussex, July 1883.	R. B. Sharpe, Esq. [P.].
k, *l*. ♂ ♀ ad. sk.	Brighton, April 4.	R. B. Sharpe, Esq. [P.].
m, *n*. ♂ ♀ ad. sk.	Brighton, March.	R. B. Sharpe, Esq. [P.].
o. Pull. sk.	Brighton, June.	R. B. Sharpe, Esq. [P.].
p. ♂ juv. sk.	Rottingdean, Sussex, Jan. 3.	R. B. Sharpe, Esq. [P.].
q. ♂ juv. sk.	Lancing, Sussex, Nov. 13.	R. B. Sharpe, Esq. [P.].
r. ♂ ad. sk.	Cookham, Berks, Feb. 11.	R. B. Sharpe, Esq. [P.].
s. ♂ ad. sk.	Cookham, Feb. 23, 1885.	R. B. Sharpe, Esq. [P.].
t. Juv. autumn. sk.	Middlesex.	N. A. Vigors, Esq. [P.].
u. Pull. sk.	Hampstead, Middlesex.	Salvin-Godman Coll.
v. Ad. st.	Epping.	H. Doubleday, Esq. [P.].
w. ♂ ad. sk.	Cambridge, Jan. (*J. Baker*).	Salvin-Godman Coll.
x. ♀ ad. sk.	Cambridge, Feb. (*F. Godman*).	H. Doubleday, Esq. [P.].
y. ♂ ad. sk.	Cambridge, March (*F. Godman*).	H. Doubleday, Esq. [P.].
z. Ad. st.	Cambridgeshire.	Mr. J. Baker [C.].
a'. ♂ ad. sk.	Norway, Aug. (*R. Collett*).	Christiania Museum [P.].
b'. ♂ ad. hiem. sk.	Skåne, Sweden, Nov. 23.	R. B. Sharpe, Esq. [P.]
c'. ♀ ad. hiem. sk.	Skåne, Sweden, Nov.	Mr. W. Meves [C.].
d'. ♂ ad. hiem. sk.	Skåne, Sweden, Feb. 5 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
e'. ♂ ad. æstiv. sk.	Malmo, Sweden, May 15 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
f'. ♀ ad. sk.	Copenhagen, Denmark, Dec. 28, 1870 (*A. Benzon*).	Hume Coll.
g'. Pull. sk.	Belgium, Aug. 10.	Brussels Museum.
h'. Ad. sk.	Heligoland, Dec. 1879 (*L. Gätke*).	R. B. Sharpe, Esq. [P.].
i'. Ad. sk.	Rome, Italy (*P. L. Sclater*).	Gould Coll.
k'. ♂ ad. sk.	Valencia, Spain, Dec. 18.	Howard Saunders, Esq. [P.].
l'. Ad. sk.	Tunis.	L. Fraser, Esq. [C.].
m'. ♀ ad. sk.	El Djen, Tunis, March 1 (*O. S.*).	Salvin-Godman Coll.
n', *o'*. ♂ ♀ ad. sk.	Orotava, Teneriffe, April 7 (*F. G.*).	Salvin-Godman Coll.
p'. Ad. sk.	Egypt, Feb. 20.	Capt. G. E. Shelley [P.].
q'. ♂ ad. sk.	Bashan, Palestine.	Canon Tristram [C.].
r'. Ad. sk.	Macedonia, March 4 (*H. J. Elwes*).	Salvin-Godman Coll.
s', *t'*. Ad. sk.	Trebizond (*Dickson & Ross*).	Gould Coll.
u'. Ad. sk.	Erzeroum (*Dickson & Ross*).	Gould Coll.
v'. Ad. sk.	Persia.	J. Gould, Esq. [P.].
w'. ♀ ad. sk.	Shiraz, 4500 feet, June.	Sir O. St. John [C.].
x', *y'*. ♂ ad. sk.	Bushire, Feb. 1885.	A. J. V. Palmer, Esq. [P.].

z'. ♂ ad. sk.	Bushire, March 1885.	A. J. V. Palmer, Esq. [P.].
a. Ad. sk.	Douloulpur, Sind, 1877 (*G. A. Murray*).	Hume Coll.

55. FRINGILLARIA.

Type.
Fringillaria, *Swains. Classif. B.* ii. p. 290 (1837) ..... F. capensis.

Range. The whole of Africa. Palestine and Arabia to North-western and Central India; Japan.

Key to the Species.

a. Inner lining of wing chestnut or rufous, which extends to the base of the inner web, sometimes (in *F. tahapisi*) very slightly developed and confined to the secondaries; under wing-coverts rufous.
  a'. Throat ashy grey or blackish; sides of face rather strongly streaked with black.
    a''. Head light grey with blackish streaks; no pale streak in the middle of the crown; throat light grey, overspreading the whole of the fore neck and chest.
      a'''. Median and greater wing-coverts with blackish centres; back streaked with black; a black line through the eye and another along the upper edge of the cheeks ..... *striolata*, p. 561.
      b'''. Median and greater coverts uniform rufous; back nearly uniform rufous; streaks through the eye and along the upper edge of the cheeks ashy grey ..... *saharæ*, p. 563.
    b''. Head black or dark brown, with a broad pale streak down the centre of the crown; throat blackish or dark ashy, not extending over the fore neck and chest.
      c'''. Primaries dark brown, edged with rufous ..... *tahapisi*, p. 558.
      d'''. Primaries entirely rufous across the base ..... *septemstriata*, p. 559.
  b'. Throat pale ashy or isabelline brown; sides of face not banded with black.
    c''. Quills dusky brown, edged with rufous.
      e'''. Back ashy brown, streaked distinctly with blackish.
        a[4]. Head exactly like the back and not any lighter in colour ..... *impetuani* ♂ ♀, p. 563.
        b[4]. Head decidedly more ashy grey than the back, which is browner. *striolata* ♀, p. 561.
      f'''. Back nearly uniform rufous, without streaks ..... *saharæ* ♀, p. 563.

d''. Quills almost entirely rufous, except the tips, which are dusky brown .... *septemstriata* ♀, p. 560.

b. No rufous lining to the quills; under wing-coverts not rufous.

c'. Breast uniform.

e''. Wing-coverts chestnut..... *capensis* ♂ ♀, p. 565.

f''. Wing-coverts grey with black centres like the breast; head uniform slate-colour like the entire under surface of the body ..... *variabilis* ♂, p. 566.

d'. Breast ochraceous buff, distinctly streaked with blackish ..... *variabilis* ♀, p. 567.

1. Fringillaria tahapisi.

Emberiza tahapisi, *Smith, Rep. S. Afr. Exped.*, App. p. 48 (1836); *Hartl. Abhandl. nat. Ver. Bremen*, vii. p. 105 (1881).

Fringillaria rufa, *Swains. Classif. B.* ii. p. 290 (1837); *id. An. in Menag.* p. 315 (1837); *Gray, Gen. B.* p. 378 (1844).

Fringillaria tahapisi, *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 467 (1850); *Cass. Proc. Philad. Acad.* 1859, p. 138; *Layard, B. S. Afr.* p. 207 (1867); *Gurney, Ibis*, 1868, p. 462; *Gray, Hand-l. B.* ii. p. 115, no. 7721 (1870); *Sharpe, Cat. Afr. B.* p. 70 (1871); *id. & Bouvier, Bull. Soc. Zool. France*, 1878, p. 77; *Bocage, Orn. Angola*, p. 370 (1877–78); *Oust. Nouv. Arch. Mus.* (2) ii. *Bull.* p. 145 (1879); *Ayres, Ibis*, 1880, p. 105; *Butler, Feilden, & Reid, Zool.* 1882, p. 302; *Shelley, Ibis*, 1882, p. 358; *Sharpe, ed. Layard's B. S. Afr.* pp. 490, 851 (1884).

Polymitra capistrata, *Cab. Mus. Hein.* Th. i. p. 129 (1850, *ex Licht. MSS.*).

Fringillaria capistrata, *Licht. Nomencl. Av.* p. 42 (1854); *Gray, Hand-l. B.* ii. p. 116, no. 7725 (1870).

Fringillaria septemstriata (*nec Rüpp.*), *Bocage, Jorn. Lisb.* 1868, p. 44; *Scl. & Hartl. P. Z. S.* 1881, p. 171.

Polymitra tahapisi, *Cab. J. f. O.* 1878, p. 228.

Adult male in winter plumage. General colour above cinnamon-rufous, mottled with black centres to the feathers, more distinct on the back and mantle, where they are slightly edged with ashy brown; lesser wing-coverts exactly like the back; median and greater wing-coverts black, edged with cinnamon, inclining to creamy buff on the extreme margins; bastard-wing, primary-coverts, and quills blackish brown, edged with pale rufous, a little more distinct on the secondaries; tail-feathers blackish, narrowly edged with ashy fulvous; crown of the head black, the feathers edged with white, more broadly down the centre of the crown, where these white margins form a tolerably distinct streak; a very distinct superciliary line of white, followed by a broad streak of black, which occupies the lores and the upper half of the ear-coverts, and is followed again by another line of white from below the eye along the lower half of the ear-coverts; cheeks black, as well as the throat, separated from each other by a malar line of white, the throat-feathers somewhat varied with white edges to the feathers; remainder of under surface

of body pale cinnamon-rufous, with ashy margins to the feathers, and concealed black bases to the under tail-coverts; axillaries and under wing-coverts cinnamon-rufous, the outer coverts mottled with black bases; quills dusky below, ashy rufous along the edge of the inner web. Total length 5 inches, culmen 0·35, wing 3·05, tail 2·3, tarsus 0·75.

Adult female in winter plumage. Browner than the male and having the head brown, streaked with black like the back; a faint streak of rufescent brown down the centre of the crown; black and white facial streaks not so strongly indicated as in the male; throat ashy, with black bases to the feathers. Total length 5 inches, culmen 0·4, wing 2·95, tail 2·35, tarsus 0·65.

Adult male and female in summer plumage. Differ from the respective winter plumages in being brighter in every respect; throat in the male entirely black, in the female ashy; white and black facial markings more distinct than in winter, and the under surface of the body much richer cinnamon-rufous, the outer tail-feathers also more distinctly edged with rufous.

Hab. Eastern Cape Colony, throughout Natal, the Transvaal, and the Matabele Country, westwards to Benguela, the Congo, and as high as Gaboon. Dr. Hartlaub has recorded it from Kiri in Equatorial Africa (*Emin Bey*), and he assures me that he has no doubt as to the species, which certainly goes to Socotra (*vide infrà*).

a. ♀ ad. sk.	Eland's Post (*T. C. Atmore*).	Sharpe Coll.
b. ♂ ad. sk.	Kingwilliamstown.	Capt. Trevelyan [P.].
c. ♂ ad. sk	Kingwilliamstown, May 15, 1886 (*C. Newby*).	Capt. Trevelyan [P.].
d, *e*. ♂ ♀ ad. sk.	Crocodile River, Transvaal, Dec. (*Wahlberg*).	Sharpe Coll.
f, *g*, *h*. ♂; *i*, *k*. ♀ ad. sk.	Tete, Zambesi (*Sir J. Kirk*).	Livingstone Expedition.
l. ♀ ad. sk.	Gaboon (*Du Chaillu*).	Sharpe Coll.
m. ♂ ad. sk.	Socotra (*Prof. Balfour*).	Brit. Assoc. [P.].

2. Fringillaria septemstriata.

Emberiza septemstriata, *Rüpp. Neue Wirb. Vög.* p. 86, tab. 30. fig. 2 (1835–40); *id. Syst. Uebers.* p. 78 (1845); *Des Murs in Lefebvre, Voy. Abyss.* p. 120 (1845); *Heugl. Syst. Uebers.* p. 42 (1856); *Blanf. Geol. & Zool. Abyss.* p. 410 (1870); *Finsch, Trans. Zool. Soc.* vii. p. 271 (1870); *id. & Hartl. Vög. Ost-Afr.* p. 400, note (1870).

Fringillaria septemstriata, *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 467 (1850); *Hartl. Orn. W.-Afr.* p. 152 (1857); *Heugl. Ibis*, 1859, p. 343; *Hartl. J. f. O.* 1861, p. 291; *Brehm, Reis. Habesch*, p. 343 (1863); *Gray, Hand-l. B.* ii. p. 116, no. 7724 (1870); *Heugl. Orn. N.O.-Afr.* iv. App. p. cxlvii (1871); *Sharpe, Cat. Afr. B.* p. 70 (1871); *Antin. & Salvad. Viagg. Bogos*, p. 113 (1873); *Shelley, Ibis*, 1883, p. 549; *Salvad. Ann. Mus. Civic. Genov.* (2) i. p. 171 (1884); *Rochebr. Faun. Sénég., Ois.* p. 259 (1884).

Polymitra septemstriata, *Cat. Mus. Hein.* Th. i. p. 129, note (1850).
Emberiza striolata, *Strickl. P. Z. S.* 1850, p. 218 (*nec Rüpp.*).
Emberiza tahapisi (*nec Smith*), *Heugl. Orn. N.O.-Afr.* ii. p. 665 (1871).

Adult male in breeding-plumage. General colour above rufescent brown, streaked with black, less distinctly so on the rump and upper tail-coverts; lesser wing-coverts uniform chestnut; median and greater series black, edged with chestnut; bastard-wing black, fringed with pale rufous; primary-coverts and quills black, edged with chestnut, this colour occupying the entire base of the outer primaries, the inner primaries and all but the innermost secondaries being entirely chestnut excepting at the tip, which is dusky blackish; upper tail-coverts and tail dusky blackish, margined with pale rufous: the outer feather rufous along the whole of the outer web and with a pale rufous wedge-shaped mark along the inner web; crown of head black on the sides, with a median streak of buffy white streaked with black; a distinct white eyebrow running from the base of the nostrils above the ear-coverts, followed by a black streak occupying the lores and the upper edge of the ear-coverts; this again followed by a white streak below the eye and along the lower part of the ear-coverts, followed by a black streak along the cheeks and by a white malar line; base of chin whitish; throat ashy grey, with black bases to the feathers; remainder of under surface deep cinnamon-rufous or chestnut; axillaries and under wing-coverts as well as the quill-lining chestnut: "upper mandible pale flesh-colour, the lower mandible dusky blackish; feet reddish; iris clear brown." Total length 5 inches, culmen 0·4, wing 3·1, tail 2·45, tarsus 0·7.

Adult female. Browner than the male, the head being like the back and streaked with black in the same manner, the crown having a slightly indicated paler streak down the centre; the chestnut on the wings less developed, the blackish tips to the inner primaries more extended, as also the black on the outer edges of the first primaries; facial markings not so distinct as in the male, the black replaced by dusky stripes and the white by fulvous; throat browner than in the male, and showing a few dusky streaks on the fore neck. Total length 5·3 inches, culmen 0·4, wing 2·8, tail 2·35, tarsus 0·65.

Hab. N.E. Africa, across to Senegambia and the Niger district.

a. ♀ ad. sk.	Abyssinia.	Dr. Rüppell [C.].
b. ♀ ad. sk.	Senafe, Tigré, May 26.	W. T. Blanford, Esq. [C.].
c. ♀ ad. sk.	Sahati, Samhar, March 24.	W. T. Blanford, Esq.
d. ♂ ad. sk.	Ain, Lebka River, Bogos, July 5.	W. T. Blanford, Esq.
e. ♀ ad. sk.	Ain, Aug. 16.	W. T. Blanford, Esq.
f. ♀ ad. sk.	Ain, Aug. 16 (*W. Jesse*).	Sharpe Coll.
g. ♂ ad. sk.	Maragaz, July 28 (*W. Jesse*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Shoa, Aug. 16, 1882 (*A. Antinori*).	Sharpe Coll.
i. ♀ ad. sk.	River Niger.	Forbes Coll.

3. Fringillaria striolata.

Fringillaria striolata, *Licht. Verz. Doubl.* p. 24 (1823).

Emberiza striolata, *Cretzschm. in Rüpp. Atlas*, p. 15, pl. 10. fig. 9 (1826); *Temm. Man. d'Orn.* iv. p. 640 (1840); *Werner, Atlas, Granivores*, pl. (1840); *Schl. Rev. Crit.* p. lxix (1844); *Rüpp. Syst. Uebers.* p. 78 (1845); *Heugl. Syst. Uebers.* p. 42 (1856); *Bree, B. Eur.* iii. p. 44, cum tab. (1864); *Tristr. Ibis*, 1867, p. 367; *Hume, Ibis*, 1869, p. 355; *Elwes & Buckley, Ibis*, 1870, p. 194; *Hume, t. c.* p. 399, 1871, p. 37; *Fritsch, Vög. Eur.* tab. 25. fig. 16 (1870); *Dresser, B. Eur.* iv. p. 197, pl. 213 (1871); *Heugl. Orn. N.O.-Afr.* i. pt. 2, p. 666 (1871); *Butler, Str. F.* 1876, p. 35; *Blanf. East. Pers.* ii. p. 258 (1876); *Hume, Str. F.* 1878, vol. ii. pp. 111, 410, 1879, p. 107; *Butler, Cat. B. Sind etc.* p. 47 (1879); *Murray, Vertebr. Faun. Sind*, p. 186 (1884).

Fringillaria striolata, *Swains. Classif. B.* ii. p. 290 (1837); *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 467 (1850); *Selys-Longch. Rev. et Mag. de Zool.* 1857, p. 124; *Degl. et Gerbe, Orn. Eur.* i. p. 306 (1867); *Loche, Expl. Sci. Algér., Ois.* i. p. 181 (1867); *Gray, Hand-l. B.* ii. p. 116, no. 7726 (1870); *Heugl. Orn. N.O.-Afr.* iv. App. p. cxlvii (1871); *Hume, Nests & Eggs Ind. B.* p. 463 (1873); *Adam, Str. F.* 1873, p. 388; *Hume, t. c.* p. 420; *id. Str. F.* 1877, p. 329, 1878, vol. ii. p. 74; *Butler, t. c.* p. 184; *Tristr. Faun. & Flor. Palest.* p. 72 (1884).

Polymitra striolata, *Cab. Mus. Hein.* Th. i. p. 129 (1850).

Adult male. General colour above sandy brown, streaked with black centres to the feathers; the lower back and rump rather more uniform and less strongly mottled; lesser wing-coverts uniform pale chestnut; median and greater coverts pale chestnut, streaked with blackish centres; bastard-wing, primary-coverts, and quills blackish, externally edged with pale chestnut, especially broad near the base of the secondaries; upper tail-coverts sandy brown, with pale margins and dusky centres; tail-feathers blackish, edged with sandy rufous, especially distinct on the outer feather; crown of head more ashy than the back and distinctly streaked with black centres; eyelid and a distinct superciliary stripe white; lores and a broad line along the upper edge of the ear-coverts blackish; remainder of ear-coverts ashy, with a white spot behind them; feathers below the eye ashy white, followed by a line of blackish along the upper margin of the cheeks, which are ashy whitish and form another stripe, which is followed by a malar line of blackish which separates the checks from the throat, the latter being ashy white; lower throat, fore neck, and chest ashy grey, mottled and streaked with black spots; remainder of the breast pale sandy fulvous or deep isabelline, paler down the centre of the abdomen, and slightly deeper on the thighs and under tail-coverts; axillaries and under wing-coverts sandy rufous; quills dusky below, with the quill-lining rufous: "upper mandible brown, lower one yellow; legs yellow; feet brownish yellow" (*A. O. Hume*). Total length 5·2 inches, culmen 0·35, wing 3, tail 2·3, tarsus 0·55.

Adult female. Not so strongly marked as the male and rather duller in colour; the head pale sandy brown like the back; the streaks not so pale on the sides of the head and sandy buff instead

of white; ear-coverts pale sandy rufous, with a lighter streak across the centre; the blackish streaks of the male only faintly indicated by dusky in the female; entire throat and chest dull ashy, not so clear as in the male and not so thickly spotted with black. Total length 5·5 inches, culmen 0·4, wing 3, tail 2·45, tarsus 0·6.

In winter the plumage of the male is much more mealy than in summer, the head being whiter and the throat and chest hoary grey. The summer plumage is assumed by the wearing-off of the light tips to the feathers. *The adult female in winter* is browner than the male, and has the head brown like the back, with blackish stripes; on the throat there is much less ashy than in the male. Young birds in winter plumage resemble the old female, but are rather more yellowish underneath.

Mr. Hume gives the following soft parts:—

Male. Upper mandible brown, the lower one dingy yellow or fleshy yellow; legs and feet pale dingy yellow, fleshy yellow, or waxy yellow; feet brownish fleshy; claws brown; iris brown.

Female. Upper mandible brown, lower mandible dusky yellow or wax-yellow, in one case the edge of the upper mandible yellow; legs and feet dingy yellow or paler fleshy yellow; iris brown.

Hab. From Palestine and Arabia, through Southern Persia and Baluchistan to North-western India, extending as far as Saugor in the Central Provinces.

a, b. ♂ ♀ ad. sk.	Engedi, Palestine.	Canon Tristram [C.].
c. ♀ ad. sk.	Ras Masandam, Arabia, Dec. 7, 1872.	W. T. Blanford, Esq. [C.].
d. ♂ ad. sk.	Bahu Kelat, Baluchistan, Feb. 2, 1872.	W. T. Blanford, Esq. [C.].
e. ♂ ad. sk.	Bahu Kelat, Baluchistan, Feb. 1, 1872 (*W. T. Blanford*).	Hume Coll.
f, g. ♂ ♀ ad. sk.	Nal, Khelat, April 29, 1877 (*O. T. Duke*).	Hume Coll.
h. Ad. sk.	Near Anjera, May 18, 1877 (*O. T. Duke*).	Hume Coll.
i. ♀ ad. sk.	Quetta (*Sir O. St. John*).	Hume Coll.
k, l. ♂ ad. sk.	Keothar range, Mehar district, Sind, Dec. 1876 (*W. T. Blanford*).	Hume Coll.
m. ♀ ad. sk.	Near Kotri, Sind, Dec. 9, 1875 (*W. E. Brooks*).	Hume Coll.
n. ♂ ad. sk.	Ranikot, north-west of Kotzi, Sind, Dec. 17, 1875 (*W. T. Blanford*).	Hume Coll.
o, p. ♂ ♀ ad. sk.	Kutch, Feb. 1872.	Hume Coll.
q. ♀ ad. sk.	Nowshera, April 27, 1872.	Hume Coll.
r. ♀ ad. sk.	Sambhur, March 14, 1872 (*R. M. Adam*).	Hume Coll.
s. Ad. sk.	Mount Abu, July 1874 (*E. A. Butler*).	Hume Coll.
t. ♂ ad.	Erinpura, Oct. 8, 1868 (*Dr. G. King*).	Hume Coll.

u–t'. ♂; *u'–v*. ♀ ad.; *ξ*. ♂ imm. sk.	Ajmere, Nov. 1869 (*A. O. H.*).	Hume Coll.
o. ♂ ad. sk.	Ajmere, Dec. 1, 1869 (*A. O. H.*).	Hume Coll.
π, *ρ*. ♂ ad. sk.	Taragurh Hill, Ajmere, March 1868 (*A. O. H.*).	Hume Coll.
σ. ♀ ad. sk.	Jodhpur, 1870 (*A. O. H.*).	Hume Coll.
τ. ♀ ad. sk.	Karólee, Oode7pore, Feb. 14, 1878 (*A. O. H.*).	Hume Coll.
υ. ♂ ad. sk.	Aligurh, Nov. 30, 1877 (*A. Anderson*).	Hume Coll.
φ. ♂ ad.; *χ*, *ψ*. ♀ ad. sk.	Etawah, April 1, 1869.	Hume Coll.
ω. ♂ ad. sk.	Saugor, Central Provinces, July 10, 1869.	Hume Coll.

4. Fringillaria saharæ.

Fringillaria saharæ, *Tristr. Ibis*, 1859, p. 295; *Gray, Hand-l. B.* ii. p. 115, no. 7718 (1870); *Gurney, jun., Ibis*, 1871, p. 291.
Emberiza saharæ, *Dixon, Ibis*, 1882, p. 573.

Adult male in breeding-plumage. General colour above uniform sandy rufous, with faintly indicated dusky centres to the scapulars; wing-coverts like the back; bastard-wing, primary-coverts, quills, and tail-feathers light brown, edged with sandy rufous; head different from the back, ashy grey, slightly tinged with brown and streaked with black; a narrow superciliary line of greyish white; lores dusky; feathers below the eye greyish white; ear-coverts dull ashy, streaked with whitish shaft-lines; cheeks greyish white, forming a band; throat and chest ashy grey, with hoary white edgings to the feathers, the chest mottled with mesial spots of black; breast sandy rufous, slightly deeper on the thighs and under tail-coverts; under wing-coverts and axillaries like the breast; quills pale dusky below, sandy rufous along the inner webs. Total length 5 inches, culmen 0·45, wing 2·9, tail 2·4, tarsus 0·65. (*Mus. H. Seebohm.*)

Young in winter plumage. Sandy rufous like the adults, but with dusky centres to the feathers, a little plainer than in the adults; head and throat a little lighter and more ashy isabelline than the back, but not grey, and with scarcely any indications of dusky streaks.

Hab. Algerian Sahara and Morocco.

a. Jun. hiem. sk.	Sahara.	Capt. Loche [C.].
b. ♂ ad. sk.	El Kantara, Algeria, May 8, 1882.	H. J. Elwes, Esq. [P.].
c. Ad. sk.	Morocco.	Gould Collection.
d. Var. sk.	[Algeria.]	Zoological Society.

5. Fringillaria impetuani.

Emberiza impetuani, *Smith, Rep. S. Afr. Exped.*, App. p. 48 (1836).
Fringillaria anthoides, *Swains. Classif. B.* ii. p. 290 (1837); *id. An. in Menag.* p. 316 (1837); *Gray, Gen. B.* ii. p. 378 (1844).

Fringillaria impetuani, *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 467 (1850); *Hartl. Orn. Westafr.* p. 152 (1857); *Layard, B. S. Afr.* p. 206 (1867); *id. Ibis*, 1868, p. 247; *Gray, Hand-l. B.* ii. p. 115, no. 7720 (1870); *Sharpe, Cat. Afr. B.* p. 70 (1871); *Ayres, Ibis*, 1871, p. 259; *Gurney in Anderss. B. Dam.-Ld.* p. 189 (1872); *Salv. Cat. Strickl. Coll.* p. 239 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 489, 851 (1884).

Adult male. General colour above sandy brown, streaked with black centres to the feathers, the mantle and upper back rather more rufescent; lesser and median wing-coverts more rufous than the back, with blackish centres; greater coverts blackish, edged with rufous, rather paler at the tips; bastard-wing, primary-coverts, and quills blackish, edged with pale rufous or isabelline, the secondaries more distinctly rufous externally, forming a conspicuous rufous wing-patch; tail-feathers blackish, with obsolete edgings of pale brown, the outer one margined externally with whitish; head like the back and streaked in the same manner; lores and a faint eyebrow sandy isabelline, as also the eyelid; ear-coverts rufous; sides of neck sandy brown, streaked with black; cheeks and throat isabelline, as also the abdomen and under tail-coverts; fore neck and breast and sides of body inclining to sandy rufous, the lower flanks narrowly streaked with blackish brown; under wing-coverts and axillaries sandy rufous or pale ferruginous; quills dusky below, rufous along the inner web: "upper mandible dusky flesh-colour, lower one livid horn-colour; legs and toes dusky flesh-colour; iris dark brown" (*Andersson*). Total length 5·2 inches, culmen 0·4, wing 2·95, tail 2·2, tarsus 0·7.

Adult female. Similar to the male in colour. Total length 5·3 inches, culmen 0·4, wing 2·75, tail 2, tarsus 0·7.

There appears to be little or no difference between the winter and summer plumages of the present species, the latter being browner and the former rather more grey and mealy in appearance.

Hab. Cape Colony, less plentiful in the eastern districts, ranging into the Transvaal and thence to Damara-Land, and said to occur in Angola.

a, b. Ad. sk.	South Africa.	Sir A. Smith [C.]. (Types of species.)
c. Ad. sk.	South Africa.	M. Verreaux [C.].
d. Ad. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
e. Ad. sk.	Berg River (*E. L. Layard*).	Sharpe Coll.
f. ♂ ad. sk.	Transvaal (*T. Ayres*).	Sharpe Coll.
g. ♂ ad. sk.	Tjanjombo, Damara-Land, Nov. 15 (*C. J. Andersson*).	Sharpe Coll.
h. ♀ ad. sk.	Omatoko, Damara-Land, Jan. 19 (*C. J. Andersson*).	Sharpe Coll.
i. ♀ ad. sk.	Orange River, July 6, 1881 (*Dr. F. Bradshaw*).	Sharpe Coll.

6. Fringillaria capensis.

Ortolan du Cap de Bonne Espérance, *Briss. Orn.* iii. p. 280, pl. xiv. fig. 4 (1760); *Daubent. Pl. Enl.* v. pl. 158. fig. 2 *, pl. 664. fig. 1.
Emberiza capensis, *Linn. Syst. Nat.* i. p. 310 (1766); *Gm. Syst. Nat.* i. p. 878 (1788); *Steph. Gen. Zool.* ix. p. 372 (1815); *Grill, Zool. Anteckn.* p. 25 (1858).
Cape Bunting, var. β, *Lath. Gen. Syn.* ii. pt. i. p. 186 (1783).
Emberiza flav.! ♀, *Bodd. Tabl. Pl. Enl.* p. 41 (1783).
Caffrarian Bunting, *Lath. Gen. Hist. B.* v. pl. 318 (1822).
Passerina capensis, *Bonn. et Vieill. Enc. Méth.* iii. p. 929 (1823).
Emberiza caffrariensis, *Steph. Gen. Zool.* xiv. p. 18 (1826).
Emberiza erythroptera, *Temm. Tabl. Méth.* p. 39 (1836).
Fringillaria vittata, *Swains. An. in Menag.* p. 315 (1837); *id. Classif. B.* ii. p. 290 (1837); *Gray, Gen. B.* ii. p. 378 (1844); *Layard, B. S. Afr.* p. 207 (1867).
Fringillaria capensis, *Swains. Classif. B.* ii. p. 290 (1837); *Strickl. Ann. & Mag. Nat. Hist.* xiii. p. 374 (1842); *Gray, Gen. B.* ii. p. 378 (1844); *Bp. Consp.* i. p. 467 (1850); *Strickl. & Scl. Contr. Orn.* 1852, p. 151; *Hartl. Orn. W.-Afr.* p. 152 (1857); *id. J. f. O.* 1861, p. 260; *Layard, B. S. Afr.* p. 206 (1867); *Gray, Hand-l. B.* ii. p. 115, no. 7716 (1870); *Sharpe, Cat. Afr. B.* p. 70 (1871); *Shelley, Ibis*, 1875, p. 80; *Sharpe, in Oates' Matabele-Land*, App. p. 322 (1881); *Holub & Von Pelz. Beitr. Orn. Südafr.* p. 135 (1882); *Salv. Cat. Strickl. Coll.* p. 238 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 489, 851 (1884); *Ayres, Ibis*, 1884, p. 230.

Adult male. General colour above brown, broadly streaked with black centres to the feathers, the head rather greyer than the back and similarly streaked with black, the crown having a more or less distinct pale central streak; rump uniform brown; upper tail-coverts brown, edged with ashy grey; lesser and median coverts chestnut, the latter with concealed black centres; greater coverts blackish, externally edged with chestnut; bastard-wing and primary-coverts blackish, fringed with pale brown edges; quills blackish, the primaries edged with ashy white, the secondaries with chestnut; tail-feathers blackish, edged with ashy, the outer one externally margined with whitish and having a slight indication of a pale wedge-shaped spot near the tip of the inner web; a very distinct white eyebrow running from the base of the nostril to the sides of the nape, followed by a black streak occupying the lores, upper eyelid, and running along the upper part of the ear-coverts; this again succeeded by a white band from the gape below the eye along the lower portion of the ear-coverts; this succeeded by another band of black along the cheeks, joining the black eye-stripe behind the ear-coverts; throat white; lower throat, fore neck, and breast ashy, as well as the sides of the body, the lower flanks having a few blackish streaks; lower abdomen and under tail-coverts dull white; thighs blackish brown; axillaries and under wing-coverts yellowish

* This figure I believe to be a bad copy of the one given in Brisson's work, coloured from his description and not from an actual specimen. It is not recognizable as the Cape Bunting, but looks more like *C. impetuani*. The description given by Brisson, however, is a good one. There can be no doubt as to the species represented in Daubenton's plate 664.

white; quills dusky below, ashy along the inner web. Total length 5·7 inches, culmen 0·6, wing 3·4, tail 2·45, tarsus 0·8.

Adult female. Rather more rufescent than the male, especially below, the white throat not so conspicuous. Total length 6·5 inches, culmen 0·45, wing 3·3, tail 2·5, tarsus 0·75.

Young. Only differs from the adults in being more dingily coloured, and in having the under surface of the body ashy, with dusky streaks on the fore neck, breast, and flanks, the white stripes on the head somewhat tinged with ochreous.

Young in winter plumage. Resembles the adult female but is even more rufous, the chestnut edgings to the wing-coverts, quills, and tail-feathers being very broad and distinct; the light streaks on the head and the under surface of the body deep ochreous buff.

Hab. Cape Colony, ranging into Namaqua-Land on the west and to the eastern Transvaal on the east. Angola (*teste* Hartlaub), but the locality requires confirmation.

a. ♀ ad. sk.	South Africa.	Sir A. Smith [P.].
b, *c.* Ad.; *d.* Juv. sk.	South Africa (*E. L. Layard*).	Sharpe Coll.
e. Ad. sk.	South Africa.	J. Gould, Esq.
f. Ad. sk.	Cape Town.	Earl of Crawford [P.].
g, *h.* Ad. sk.	Cape Town (*C. J. Andersson*).	Sharpe Coll.
i. Ad. sk.	Green Point, Cape Town Nov. 6 (*C. J. A.*).	Sharpe Coll.
k. ♂ ad. sk.	Mossel Bay, April 11 (*F. Oates*).	W. E. & C. G. Oates, Esqrs. [P.].
l. ♂ ad. sk.	Rustenberg, June 6, 1878 (*W. Lucas*).	Sharpe Coll.
m. Ad. sk.	Tjobis, Damara-Land, May 30 (*C. J. A.*).	Sharpe Coll.

7. Fringillaria variabilis.

Emberiza variabilis, *Temm. Pl. Col.* iii. pl. 583. fig. 2 (1835); *Gray, Gen. B.* ii. p. 377 (1844); *Temm. & Schl. Faun. Jap., Aves*, pl. lvi. (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 487 (1856); *Blakist. & Pryer, B. of Japan*, p. 171 (1882); *Blakist. Chrysanth.* 1883, p. 35; *id. Amended List B. Japan*, pp. 17, 61 (1884).

Euspiza variabilis, *Bp. Consp.* i. p. 469 (1850); *Gray, Hand-l. B.* ii. p. 112, no. 7673 (1870); *Swinh. Ibis*, 1875, p. 457; *Tacz. Bull. Soc. Zool. France*, 1879, p. 137, 1882, p. 392.

Zonotrichia musica, *Kittl. Denkw.* ii. p. 201 (1858); *Hartl. J. f. O.* 1859, p. 50.

Hypocentor variabilis, *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 247 (1885).

Adult male. General colour above sooty grey, the mantle slightly washed with brown and mottled with black spots at the end of the feathers, the scapulars similarly marked; lesser wing-coverts sooty grey, the median and greater coverts as well as the quills blackish, sooty grey externally and at the tips of the coverts and inner

secondaries, the latter being washed with brown; lower back, rump, and upper tail-coverts uniform sooty grey; tail-feathers blackish, margined with ashy, the outer one slightly paler at the extreme tip of the inner web; head and neck all round, as well as the under surface of the body, sooty grey, the ear-coverts rather lighter; abdomen paler ashy; the under tail-coverts grey with ashy-whitish margins; axillaries and under wing-coverts sooty grey; quills dusky below, the inner webs ashy: "bill blackish brown, tomia and lower mandible flesh-coloured; feet light brownish flesh-colour, claws pale" (*Stejneger*). Total length 6·5 inches, culmen 0·6, wing 3·5, tail 2·6, tarsus 0·85.

The *adult male in winter plumage* differs from the summer plumage in having the feathers of the upper surface obscured by reddish-brown margins, the under surface having the grey of the throat and breast obscured by rusty edges to the feathers, while the lighter grey of the abdomen is mottled with whitish edgings.

Adult female. Different from the male, and much browner and more sparrow-like. Upper surface brown streaked with black; the lower back, rump, and upper tail-coverts deep chestnut; tail-feathers blackish, edged with chestnut, the outer feather with a whitish tip to the inner web; wing-coverts brown, edged with rufous; median and greater coverts blackish, edged with pale rufous and tipped with dull white, forming a narrow double wing-bar; quills blackish, edged with rufous, the primaries with ashy whitish; crown uniform dark brown; an indistinct superciliary streak of buffy whitish; eyelid yellowish buff; ear-coverts uniform brown; cheeks yellowish buff, separated from the throat by a broad moustachial line of dusky; under surface of body yellowish buff, as also the sides of the body, which are slightly washed with brown; thighs ashy brown; fore neck, breast, and sides distinctly streaked with blackish; lower breast and abdomen dull white; axillaries and under wing-coverts ashy with dull whitish margins; quills dusky below, ashy along the edge of the inner web. Total length 6 inches, culmen 0·5, wing 3·25, tail 2·6, tarsus 0·8.

Young male. Is much duller grey than the adult, and is streaked both above and below with blackish.

Hab. Eastern Siberia, Kamtschatka, and Japan.

a. ♂ ad. sk.	Japan.	Purchased.
b. ♂ juv. sk.	Japan.	Purchased.
c. ♂ ad. sk.	Japan.	India Mus.
d. ♂ ad. sk.	Japan.	Gould Coll.
e. ♂; *f, g.* ♀ ad. sk.	Nagasaki, Japan, Dec.	F. Ringer, Esq. [P.].
h. ♂ ad. sk.	Nagasaki, Japan, Jan. 16.	F. Ringer, Esq. [P.].
i. ♀ ad. sk.	Hakodadi, Oct. 11.	H. Whitely [C.].
k. ♀ ad. sk.	Yokohama.	Prof. Milne [C.].

56. MELOPHUS.

Melophus, *Swains. Classif. B.* ii. p. 290 (1837). Type. M. melanicterus.

Head of *Melophus melanicterus.*

Range. Coincident with that of the species.

1. Melophus melanicterus.

Moineau de Macao, *Daubent. Pl. Enl.* iv. pl. 224. fig. 1; *Montb. Hist. Nat. Ois.* iii. p. 486 (1775).
Black and Orange Finch, *Lath. Gen. Syn.* ii. pt. i. p. 268 (1783).
Fringilla melanictera, *Gm. Syst. Nat.* i. p. 910 (1788).
Emberiza erythroptera, *Jard. & Selby, Ill. Orn.* pl. 132 (1825–39).
Emberiza cristata, *Vigors, P. Z. S.* 1831, p. 35; *Sykes, P. Z. S.* 1832, p. 94; *Blyth, J. A. S. Beng.* xi. p. 602 (1842).
Emberiza lathami, *J. E. Gray, Zool. Misc.* p. 2 (1831); *Blyth, J. A. S. Beng.* xiii. p. 957 (1844).
Emberiza subcristata, *Sykes, P. Z. S.* 1832, p. 93.
Emberiza nipalensis, *Hodgs. Asiat. Research.* xix. p. 157 (1836); *id. Icon. ined., Passeres*, pl. 289. figs. 1, 2 (nos. 341–42); *id. in Gray's Zool. Misc.* p. 84 (1844).
Melophus erythropterus, *Swains. Classif. B.* ii. p. 290 (1837).
Euspiza lathami, *Gray, Gen. B.* ii. p. 376 (1844); *id. Cat. Mamm. etc. Nepal pres. Hodgs.* p. 107 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 129 (1849).
Melophus melanicterus, *Bp. Consp.* i. p. 470 (1850); *Horsf. & Moore, Cat. B. E.I. Co. Mus.* ii. p. 489 (1856); *Jerd. B. Ind.* ii. p. 381 (1863); *Swinh. P. Z. S.* 1871, p. 387; *Hume, Nests and Eggs Ind. B.* p. 467 (1873); *id. Str. F.* 1873, p. 47; *Cock & Marsh. t. c.* p. 357; *Godwin-Aust. J. A. S. Beng.* xliii. p. 171 (1874); *Blyth & Wald. B. Burm.* p. 95 (1875); *Hume, Str. F.* 1875, p. 254; *Butler, t. c.* p. 498; *id. Str. F.* 1876, p. 37; *Hume, t. c.* p. 224; *Fairb. t. c.* p. 261; *Wardlaw Ramsay, Ibis*, 1877, p. 462; *David & Oust. Ois. Chine*, p. 333 (1877); *Anderson, Zool. Exped. Yun-nan, Aves*, p. 604 (1878); *Hume & Davis. Str. F.* 1878, p. 409; *Davids. & Wenden, Str. F.* 1878, vol. ii. p. 95; *Murray, t. c.* p. 113; *Hume, Str. F.* 1879, p. 107; *Scully, t. c.* p. 334; *Butler, Cat. B. Sind etc.* p. 48 (1879); *id. Str. F.* 1880, p. 17; *id. Cat. B. S. Bomb. Pres.* p. 63 (1880); *Oates, B. Brit. Burm.* i. p. 357 (1883); *Murray, Vertebr. Faun. Sind*, p. 189 (1884).
Euspiza melanictera, *Gray, Hand-l. B.* ii. p. 112, no. 7682 (1870).

Adult male in breeding-plumage. General colour above glossy blue-black, the head with crest-feathers 1·05 inch long; wing-coverts and quills bright chestnut, with black margins to the lesser

coverts, and dusky blackish tips to the primaries and inner secondaries; upper tail-coverts deep maroon, with narrow blackish margins; tail chestnut; sides of face and entire under surface glossy blue-black; thighs and under tail-coverts maroon, the long coverts laterally black; under wing-coverts chestnut, as also the lower surface of the quills; axillaries black like the back: "bill dusky, blackish above and fleshy at base of lower mandible; feet fleshy brown, the toes darker; claws bluish, pale at tips; iris dark brown" (*Scully*). Total length 6·3 inches, culmen 0·5, wing 3·15, tail 2·6, tarsus 0·75.

Adult male in winter plumage. Differs from the summer plumage only in having the black feathers obscured by ashy tips. The fresh-moulted quills and tail-feathers appear to have a good deal of black at the tips, which disappears as the breeding-season advances.

Adult female. Quite different from the male. Brown above, slightly mottled with blackish-brown centres to the feathers, the long crest-feathers being also brown, with longitudinal black centres; lesser wing-coverts like the back; median and greater series blackish brown, edged with rufous; bastard-wing and primary-coverts blackish brown, fringed with dull rufous; quills rufous, dusky brown externally and at the tips, the inner secondaries entirely brown, with fulvescent margins; tail-feathers brown, edged with fulvous, the outer feather rufous, with a dusky-brown tip to the outer web and an oblique dusky mark along the inner web; the penultimate feather with a rufous mark on the inner web; lores and feathers round the eye dull whitish; ear-coverts and sides of neck dusky brown; cheeks and under surface of body dull ashy, the chin yellowish white; throat, breast, and sides of body dusky brown, streaked with black; under tail-coverts rufescent, with blackish centres; axillaries dusky brown like the breast; under wing-coverts and inner lining of quills rufous, the latter with dusky brown tips. Total length 6·5 inches, culmen 0·55, wing 3·15, tail 2·55, tarsus 0·7.

Young males at first resemble the adult female, but may generally be recognized by the quills, some of the primaries being chestnut at the base, and there is generally a rufous mark on the third tail-feather. A few black feathers in the crest and chestnut wing-coverts seem to be the first approach to assuming the full plumage, while the general tone of the plumage becomes blacker, and the chestnut gradually spreads over the tail, leaving the ends of the tail-feathers blackish. The latter character varies greatly, even in full-plumaged birds, and probably disappears only in very old individuals, which have a perfectly chestnut tail. The maroon-coloured upper tail-coverts are also only attained with maturity, and are generally seen intermixed with black, partaking of the character of the tail. I gather from the series in the Museum that the full black plumage is not assumed the first year, but probably takes at least two or perhaps three years to attain to its full perfection.

Hab. Himalayas, ranging into the plains of India, as far westwards as Sind and eastwards into Southern China. Upper Burmese provinces, Karen Hills, and once in Tenasserim.

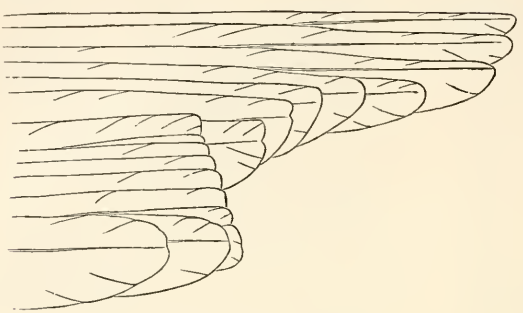
a. ♂ ad. sk.	Mount Abu, April 20, 1868 (*Dr. G. King*).	Hume Coll.
b. ♂ ad. sk.	Mount Abu, May 1, 1868 (*Dr. G. King*).	Hume Coll.
c. ♂ ad. sk.	Mount Abu, May 1875 (*E. A. Butler*).	Hume Coll.
d, *e*. ♂ ♀ ad. sk.	Mount Abu, April 1875 (*E. A. Butler*).	Hume Coll.
f, *g*, *h*. ♂ ad.; *i*. ♀ ad. sk.	Mount Abu, April 1868 (*A. O. H.*).	Hume Coll.
k. ♀ ad. sk.	Sambhur, June 15, 1873 (*R. M. Adam*).	Hume Coll.
l, *m*, *n*. ♂ ad.; *o*. ♂ juv. sk.	Sambhur, May 1873 (*R. M. Adam*).	Hume Coll.
p. ♂ ad. sk.	Gurgaon district, May 29, 1878 (*C. T. Bingham*).	Hume Coll.
q. ♀ ad. sk.	Sultanpur, Gurgaon district, May 4, 1880 (*W. N. Chill*).	Hume Coll.
r, *s*. ♂ imm. sk.	Jhansi, April 28, 1868.	Hume Coll.
t, *u*. ♂ ad. sk.	Cashmere, Aug. 1870.	Hume Coll.
v, *w*. ♂ ad. sk.	Dhurmsala, April 8, 1873 (*W. E. Brooks*).	Hume Coll.
x, *y*. ♂ ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
z. ♂ ad.; *a'*, *b'*. ♀ ad.; *c'*. ♂ juv. sk.	Syree, near Simla, Aug. 1868 (*A. O. H.*).	Hume Coll.
d', *e'*. ♂ ad.; *f'*. ♀ ad. sk.	Masuri.	Hume Coll.
g'. ♀ ad. sk.	Almora.	Capt. Stackhouse Pinwill [P.].
h'. ♂ ad.; *i'*, *k'*. ♀ ad.; *l'*. ♂ imm. sk.	Almora, May 1865.	Hume Coll.
m', *n'*, ♂ ad.; *o'*. ♀ ad.; *p'*. ♂ juv. sk.	Kumaon (*Strachey*).	India Museum.
q'. ♂ ad.; *r'*. ♀ ad. sk.	Kumaon Bhabur, March 1871 (*G. King*).	Hume Coll.
s'. ♀ ad. sk.	Kumaon, May 1867.	Hume Coll.
t'. ♂ ad.; *u'*. ♂ juv. sk.	Dhoon, Jan. 1870.	Hume Coll.
v'. ♀ ad. sk.	Etawah, Jan. 15, 1876 (*W. E. Brooks*).	Hume Coll.
w'. ♀ ad. sk.	Etawah, Jan. 8, 1871.	Hume Coll.
x'. ♀ ad. sk.	Etawah, Feb. 10, 1869.	Hume Coll.
y', *z'*. ♂ ad. sk.	Etawah, April 1869.	Hume Coll.
a. ♂ ad. sk.	Etawah, Dec. 1865.	Hume Coll.
β, *γ*. ♂ ad. sk.	Behar.	Hodgson Coll.
δ, *ε*. ♂ ad.; *ζ*, *η*, *θ*, *ι*. ♀ ad. sk.	Nepal.	Hodgson Coll.
κ, *λ*. ♂ ♀ ad. sk.	Nepal (*B. H. Hodgson*).	India Museum.
μ. ♂ ad. sk.	Above Jitpur, Nepal, July 19, 1877 (*J. Scully*).	Hume Coll.
ν. ♂ juv. sk.	Near Tokha, Nepal, Feb. 24, 1878 (*J. Scully*).	Hume Coll.
ξ. ♀ ad. sk.	Nilkaut Road, Nepal, Feb. 17, 1878 (*J. Scully*).	Hume Coll.
o. ♀ ad. sk.	Native Sikhim, April 1874 (*L. Mandelli*).	Hume Coll.

π. ♂ ad. sk.	Sikhim, June 1874 (*L. Mandelli*).	Hume Coll.
ρ, σ. ♂ ♀ ad. sk.	Sikhim, Sept. 1873 (*L. Mandelli*).	Hume Coll.
τ. ♀ ad. sk.	Sikhim, Nov. 1872 (*L. Mandelli*).	Hume Coll.
υ, ϕ. ♂ ♀ ad.; χ. ♂ juv. sk.	Bhootan Dooars, Jan. 1877 (*L. Mandelli*).	Hume Coll.
ψ. ♀ ad.; ω. ♂ juv. sk.	Lower Hills, Bhootan Dooars, Jan. 1873 (*L. Mandelli*).	Hume Coll.
α'. ♀ ad. sk.	Bhootan (*Pemberton*).	India Museum.
β'. ♀ ad. sk.	Koomboo, Manipur, March 31, 1881 (*A. O. H.*)	Hume Coll.
γ'. ♂ ad. sk.	Bishnoopur, Manipur, Feb. 17, 1881 (*A. O. H.*).	Hume Coll.
δ'. ♀ ad. sk.	Kangou, Manipur, April 29, 1881 (*A. O. H.*).	Hume Coll.
ϵ'. ♂ imm. sk.	Soognoo, Manipur, March 25, 1881 (*A. O. H.*).	Hume Coll.
ζ'. ♂ ad. sk.	Bhamo.	Oates Coll.
η'. ♀ ad. sk.	Bhamo, Feb. 22.	Dr. J. Anderson [C.].
θ'. ♂ ad. sk.	Ponsee, Kachyen Hills, March 25.	Dr. J. Anderson [C.].
$'$. ♂ imm. sk.	Beeling, Tenasserim, Feb. 11, 1876 (*W. Davison*).	Hume Coll.
κ'. ♀ ad. sk.	Raipur.	Hume Coll.
λ', μ'. ♀ ad. sk.	Saugor, April 19, 1869.	Hume Coll.
ν'. ♂ ad. sk.	Saugor (*W. Hooper*).	India Museum.
ξ', o'. ♂ ♀ ad. sk.	Jubbulpur, May 1868.	Hume Coll.
π'. ♀ ad. sk.	Palamow, April 5, 1878.	Hume Coll.
ρ', σ'. ♂ ad. et juv. sk.	Manpur, Central India.	Col. Swinhoe [P.].
τ', υ'. ♂ ad.; ϕ'. ♀ ad. sk.	Hills north of Khandeish, May 21, 1875.	Hume Coll.
χ', ψ'. ♂ ad. sk.	Dahivel, Khandeish, Jan. 29, 1881 (*J. Davidson*).	Hume Coll.
ω'. ♀ ad. sk.	Talvela, Khandeish, Dec. 8, 1880 (*J. Davidson*).	Hume Coll.
a, b. ♂ ad. et juv. sk.	Deccan (*Sykes*).	India Museum.
c. ♂ ad. sk.	Eastern slope of Mahabaleshwur Hills, June 2, 1874 (*S. B. Fairbank*).	Hume Coll.
d. ♀ ad. sk.	Amoy, China, Jan. 1867 (*R. Swinhoe*).	Hume Coll.
e. ♂ ad. sk.	Amoy, China, June 1866 (*R. Swinhoe*).	Hume Coll.
f. ♂ imm. sk.	Amoy, April (*R. Swinhoe*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Amoy, Feb. (*R. Swinhoe*).	Salvin-Godman Coll.
h. ♂ ad. st.	China.	J. R. Reeves, Esq. [P.].

57. PLECTROPHENAX.

Type.

Plectrophanes, *auct.* (*nec Meyer*).
Plectrophenax, *Stejneger, Proc. U. S. Nat. Mus.* v. p. 33 (1882) ..... P. nivalis.



Wing of *Plectrophenax nivalis.*

Range. The northern portions of both hemispheres, ranging southward in winter.

1. Plectrophenax nivalis.

The Lesser Pied Mountain Finch, *Albin, Nat. Hist. B.* iii. pl. 71 (1740).

The Snow-bird from Hudson's Bay, *Edwards, Nat. Hist. B.* iii. p. 126 (1750).

L'Ortolan de Neige, *Briss. Orn.* iii. p. 285 (1760); *Daubent. Pl. Enl.* v. pl. 497. fig. 1.

Emberiza nivalis, *Linn. Syst. Nat.* i. p. 308 (1766); *Meyer u. Wolf, Taschenb.* p. 187 (1810); *Pall. Zoogr. Rosso-Asiat.* ii. p. 32 (1811); *Wils. Amer. Orn.* iii. p. 36, pl. 21. fig. 2 (1811); *Koch, Syst. baier. Zool.* p. 213 (1816); *Temm. Man. d'Orn.* p. 319 (1820); *Naum. Vög. Deutschl.* iv. pls. 106, 107 (1824); *Werner, Atlas, Granivores,* pl. 28 (1827); *Nutt. Man.* i. p. 458 (1832); *Ménétr. Cat. rais. Cauc.* p. 41 (1832); *Audub. B. Amer.* pl. 189; *id. Orn. Biogr.* ii. p. 315 (1834), v. p. 496 (1839); *Nordm. in Démid. Voy. Russ. Mérid.* iii. p. 177 (1840); *Kjærb. Orn. Dan.* pl. 25. fig. 5 (1852); *Schl. Vog. Nederl.* pl. 159 (1854); *Sundev. Svensk. Fogl.* pl. 7. figs. 5, 6, 7 (1856); *Schl. Dier. Nederl., Vog.* pl. 15. figs. 10, 11 (1861); *F. & P. Godman, Ibis,* 1861, p. 83; *Rowley, Ibis,* 1862, p. 89; *A. Newt. in Baring Gould's Iceland,* p. 409 (1863); *Wright, Ibis,* 1864, p. 55; *Gray, Hand-l. B.* ii. p. 116, no. 7727 (1870); *Wright, Ibis,* 1870, p. 490; *Harting, Handb. Brit. B.* p. 25 (1872); *Wright, Ibis,* 1874, p. 233; *Cordeaux, Ibis,* 1875, p. 182; *Fallon, Ois. Bely.* p. 90 (1875); *Seebohm, Ibis,* 1882, pp. 217, 379; *id. Hist. Brit. B.* ii. p. 125 (1883).

Ortolan de passage, *Daubent. Pl. Enl.* v. pl. 511. fig. 2.

L'Ortolan de Lorraine, femelle, *Montb. Hist. Nat. Ois.* iv. p. 323 (1778).

Emberiza notata, *P. L. S. Müll. Natursyst., Suppl.* p. 157 (1776).
Snow Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 161 (1783).
Tawny Bunting, *Lath. t. c.* p. 164 (1783).
Mountain Bunting, *Lath. t. c.* p. 165 (1783).
Lorrain Bunting, *Lath. t. c.* p. 176 (1783).
Emberiza mustelina, *Gm. Syst. Nat.* i. p. 867 (1788).
Emberiza montana, *Gm. Syst. Nat.* i. p. 867 (1788).
Emberiza lotharingica, *Gm. Syst. Nat.* i. p. 882 (pt.).
Emberiza glacialis, *Lath. Ind. Orn.* i. p. 398 (1790); *Yarr. Brit. B.* i. p. 425 (1843).
Passerina nivalis, *Vieill. Faune Franç.* p. 86 (1820); *Roux, Orn. Prov.* pl. 103 (1825).
Plectrophanes nivalis, *Meyer, Zus. u. Bericht. Meyer u. Wolf, Taschenb.* p. 57 (1822); *Boie, Isis,* 1822, p. 554; *Gould, B. Eur.* iii. pl. 170 (1837); *Macgill. Brit. B.* i. p. 460 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 37 (1838); *Keys. u. Blas. Wirb. Eur.* p. 154 (1840); *Audub. B. Amer.* iii. p. 55, pl. 156 (1841); *Selys-Longch. Faune Belge,* p. 82 (1842); *Schl. Rev. Crit.* p. lxxii (1844); *Gray, Gen. B.* ii. p. 379 (1844); *Thomps. B. Irel.* i. p. 237 (1849); *Bp. Consp.* i. p. 462 (1850); *Middend. Sibir. Reis., Zool.* p. 134 (1851); *Hewits. Eggs Br. B.* i. p. 184, pl. 46. fig. 3 (1856); *Newwied, J. f. O.* 1858, p. 345; *Baird, B. N. Amer.* i. p. 432 (1858); *Jaub. et Barth.-Lapomm. Rich. Orn.* p. 170 (1859); *Schrenck, Reis. Amurl.* p. 275 (1859); *Evans & Sturge, Ibis,* 1861, p. 170; *Reinh. Ibis,* 1861, p. 7; *Blakist. Ibis,* 1863, p. 72; *Gray, List Brit. B.* p. 104 (1863); *Radde, Reis. Sibir., Vög.* p. 156 (1863); *More, Ibis,* 1865, p. 124; *A. Newt. t. c.* p. 502; *Godm. Ibis,* 1866, pp. 96, 107; *Baird, Ibis,* 1867, pp. 281, 286, 289; *Drake, t. c.* p. 427; *Degl. & Gerbe, Orn. Eur.* i. p. 332 (1867); *Dall & Bann. Trans. Chicago Acad.* i. p. 282 (1869); *Borggr. Vogelf. Norddeutschl.* p. 71 (1869); *Doderl. Avif. Sicil.* p. 91 (1869); *Droste, Vogelw. Borkums,* p. 109 (1869); *Cooper, B. Calif.* p. 177 (1870); *Godman, Azores,* p. 26 (1870); *Fritsch, Vög. Eur.* tab. 25. figs. 17, 18 (c. 1870); *Gillett, Ibis,* 1870, p. 306; *Salvad. Faun. Ital., Ucc.* p. 145 (1871); *Swinh. P. Z. S.* 1871, p. 389; *R. Gray, B. West Scotl.* p. 125, cum tab. (1871); *Heugl. Ibis,* 1872, p. 61; *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 133 (1872); *Finsch, Abhandl. nat. Ver. Bremen,* iii. p. 54 (1872); *Dresser, B. Eur.* iv. p. 261, pl. 225 (1873); *Severtz. Turkest. Jevotn.* p. 64 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 512, pl. 24. fig. 2 (1874); *Coues, B. N.-West,* p. 118 (1874); *Harting, Faun. Prybilov Isl.* p. 17 (1875); *Irby, B. Gibr.* p. 117 (1875); *Dresser, Ibis,* 1875, p. 250; *Danf. & Harvie Brown, t. c.* p. 312; *Swinh. t. c.* p. 451; *Seebohm & Harvie Brown, Ibis,* 1876, p. 118; *Newt. ed. Yarr. Brit. B.* ii. p. 1 (1876); *Tacz. Bull. Soc. Zool. France,* i. p. 174 (1876); *Finsch, Ibis,* 1877, p. 59; *David & Oust. Ois. Chine,* p. 320 (1877); *Blak. & Pryer, Ibis,* 1878, p. 244; *Seebohm, t. c.* p. 340; *Finsch, Ver. z.-b. Gesellsch. Wien,* xxix. p. 219 (1879); *Irby, Ibis,* 1879, p. 345; *Gigl. Ibis,* 1881, p. 203; *Bolau, J. f. O.* 1881, p. 60, 1882, p. 336; *Blak. & Pryer, B. Japan,* p. 172 (1882); *Coues, Check-list,* p. 51 (1882); *Tacz. Bull. Soc. Zool. France,* vii. p. 392 (1882); *Nelson, Cruise R. S. 'Corwin,'* p. 68 (1883); *Homeyer & Tancré, MT. orn. Ver. Wien,* 1883, p. 90; *B. O. U. List Br. B.* p. 63 (1883); *Irby, Ibis,* 1883, p. 184; *Blak. Amended List B. Japan,* p. 22 (1884); *Radde, Orn. Cauc.* p. 198 (1884); *Coues, Key N. Amer. B.* p. 356 (1884); *Murdoch, Exped. Pt. Barrow, Birds,* p. 105 (1885).

Emberiza (Plectrophanes) nivalis, *Swains. & Richards. Faun. Bor.-Amer., Birds*, p. 246 (1831).
Plectrophanes hiemalis, *Brehm, Vög. Deutschl.* p. 304 (1831).
Plectrophanes borealis, *Brehm, Vög. Deutschl.* p. 305 (1831).
Plectrophanes mustelinus, *Brehm, Vög. Deutschl.* p. 306 (1831).
Plectrophanes montanus, *Brehm, Vogelf.* p. 119 (1855).
Emberiza borealis, *Degl. Orn. Eur.* i. p. 273 (1849).
Plectrophenax nivalis, *Stejneger, Proc. U. S. Nat. Mus.* v. p. 33 (1882); *Turner, Auk*, ii. p. 157 (1885); *Stejneger, Bull. U. S. Nat. Mus.* no. 29, p. 248 (1885); *A. O. U. Check-list N. Amer. B.* p. 262 (1886); *Salvad. Elench. Ucc. Ital.* p. 160 (1887).
Calcarius nivalis, *Giglioli, Avif. Ital.* p. 56 (1886).

Adult male. General colour above black, generally with a few remains of whitish margins to the feathers of the lower back and rump; sides of the rump and lateral upper tail-coverts white, the remainder of the latter black, edged with white; scapulars black; wing-coverts white; bastard-wing black; primary-coverts white; primaries black, the basal third white; the secondaries white, excepting the innermost, which are black like the innermost greater coverts; tail-feathers black, fringed externally and round the tip with white, increasing on the fourth, which has a broad white border; the three outer tail-feathers white, with a small black mark at the end of the outer web, a little larger on the third feather, where it is seen on the inner web also; head and neck all round and entire under surface of body pure white, including the axillaries, under wing-coverts, and lining of quills: "bill dull yellowish, darker towards the point; legs black; iris dark brown" (*Dresser*). Total length 7 inches, culmen 0·5, wing 4·45, tail 2·7, tarsus 0·85.

Adult female in breeding-plumage. Never so distinctly black and white as the male. Above blackish, mottled with greyish bases and greyish-white edges to the feathers; the crown like the back, and washed with fulvous; wing-coverts blackish brown, tipped with white; bastard-wing, primary-coverts, and quills blackish brown, edged with whitish; the secondaries white, washed with brown near the end of the outer web, the inner secondaries brown, edged with white; tail-feathers as in the male, but with more brown on the outer feathers, especially on the third feather; eyebrow, lores, and under surface of body dull white; the ear-coverts dull ashy; sides of upper breast ashy brown. Total length 6 inches, culmen 0·45, wing 3·8, tail 2·35, tarsus 0·8.

The old females never have the black markings on the outer tail-feathers reduced to the same extent as the males, the third feather always showing a considerable amount of black at the tip, whereas in some old males it is reduced to a small mark on the two outer feathers.

Nestling. Ashy ochreous, the back mottled with blackish centres, the head and neck slightly varied with dusky bases to the feathers; wing-coverts dull white, washed with pale rufous; bastard-wing black as well as the outer margin of the outer greater coverts; primary-coverts and primaries blackish, edged and tipped with ashy

rufous; secondaries white, externally washed with pale rufous, the inner secondaries black, rufescent externally and at the tips; tail-feathers blackish, broadly margined with ashy rufous, the three outer ones white, with rufescent margins and tips, with more or less black towards the ends of the outer webs, the third feather blackish at the end of the inner web as well; sides of face, sides of neck, and ear-coverts ashy like the head; under surface of body pale ochreous, whiter on the under tail-coverts; the fore neck and lower throat washed with ashy; under wing-coverts, axillaries, and inner lining of quills ashy whitish.

From this plumage the young bird moults into a completely rufescent dress, which is very similar to that of the adults in winter.

Adult male in winter plumage. Differs from the summer in being sandy rufous or pale chestnut, only mottled on the upper surface where the black bases to the feathers show through; lower back, rump, and upper tail-coverts more distinctly and uniformly sandy rufous, the latter broadly tipped with the latter colour; tail-feathers as in summer, but with broader and more rufescent margins; wings as in summer, but with a rufescent tinge on the coverts; the primary-coverts black with white bases, and the white confined to the extreme base of the primaries; inner greater coverts and inner secondaries very broadly edged with rufous; entire head and neck washed with pale chestnut, the crown blackish; sides of face and under surface of body white, washed with pale chestnut on the sides of the body, the fore neck, and throat, deepening on the ear-coverts.

The *adult female in winter plumage* can only be distinguished from the male by the less amount of white on the tail, and by the wing-coverts, which are not white but blackish, with ashy-white or rufescent margins; the secondaries also have less white than the males. *Young females in winter plumage* cannot be distinguished from old females at the same time of year. *Young males in winter plumage* can be told by their ashy-white wing-coverts and by the greater extent of white on the outer tail-feathers. The chestnut shade on the head and underparts varies with individuals, but in the early autumn it often overspreads the entire underparts, and is very deep on the face and throat.

As the summer plumage is gradually assumed by shedding the pale edges to the feathers, specimens in all kinds of intermediate stages are seen in collections. The black tips to the primary-coverts in the males disappear, and the white bases to the primaries extend by degrees, as the rufous on the upper parts disappears, allowing the underlying white and black plumage to predominate.

Hab. The same as that of the genus.

a. ♀ hiem. sk.	Orkneys (*Dunn*).	R. B. Sharpe, Esq. [P.].
b. Ad. sk.	Cambridge (*F. Godman*).	Salvin-Godman Coll.
c. ♂ hiem. sk.	Ely, Dec. 5 (*F. Godman*).	Salvin-Godman Coll.
d, *e*. Ad. hiem. st.	Cambridgeshire.	Mr. J. Baker [C.].
f. ♂ ad. hiem. sk.	Cookham, Berks, Nov. 28, 1874 (*R. B. S.*).	R. B. Sharpe, Esq. [P.].
g. ♀ imm. sk.	Somersetshire.	Col. Montagu [C.].

h. ♀ hiem. sk.	Hayle, Cornwall.	G. A. Copeland, Esq. [P.].
i. ♂ ad. sk.	Quickiock, Lapland, Apr. 17 (*H. Wheelwright*).	Gould Collection.
k. Juv. sk.	Quickiock, May 21 (*H. Wheelwright*).	Gould Collection.
l. ♀ ad. sk.	Quickiock, June (*H. Wheelwright*).	Gould Collection.
m. ♂ ad. sk.	Farköping, Sweden, March 20, 1871.	Hume Coll.
n. ♂ ad. sk.	Upland, Sweden, Feb. 1.	Mr. W. Meves [C.].
o. ♀ juv. sk.	Malmö, Sweden, Jan. 2 (*W. Meves*).	R. B. Sharpe, Esq. [P.].
p, *q*. ♂ ♀ ad. hiem.; *r*. ♂ juv. hiem. sk.	Malmö, Sweden, Nov. (*W. Meves*).	R. B. Sharpe, Esq. [P.].
s. ♀ ad. sk.	Skarstad, Norway, May (*P. Godman*).	Salvin-Godman Coll.
t, *u*. ♂ ♀ ad. sk.	Bodö, Norway, May (*F. Godman*).	Salvin-Godman Coll.
v, *w*. ♂ ad. sk.	Norway, March 25 (*R. Collett*).	Christiania Museum [P.].
x. ♀ ad. sk.	Hammerfest, July 7 (*R. Collett*).	Christiania Museum [P.].
y. Pnll. sk.	Porsanger Fjord, July 16 (*R. Collett*).	Christiania Museum [P.].
z, *a'*. ♂ juv., ♀ ad. sk.	Havre, Nov. (*V. Pluche*).	Edward Hargitt, Esq. [P.].
b'. ♂ ad. sk.	Archangel, May 4, 1875.	Hume Coll.
c', *d'*. Ad. hiem. sk.	N. Russia.	Moscow Museum [E.].
e'. ♂ ad. sk.	Ust Zylma, Petchora River, July 5.	Major Feilden and J. A. Harvie Brown, Esq. [P.].
f'. ♂ ad. sk.	Iceland.	Gould Coll.
g'. ♂ ad. sk.	82° 41′ N., May 1871 (*H. W. Feilden*).	Voy. H.M.S. 'Alert.'
h'. [♀] ad. sk.	Arctic America (Sm. no. 17649).	Sclater Coll.
i'. ♀ ad. sk.	Arctic America.	Sir G. Back [P.].
k'. Ad. sk.	Arctic America.	Sir J. Richardson [P.].
l'. ♀ ad. sk.	Arctic America, June 14.	Dr. McCormick [C.].
m', *n'*. ♂ ♀ ad. sk.	Repulse Bay.	Dr. Rae [P.].
o'. ♂ ad. sk.	Fort George, Hudson's Bay, April 26.	Gould Coll.
p'. Imm. sk.	Lichtenfels, Greenland, Sept. 1.	R. B. Sharpe, Esq. [P.].
q'. Imm. sk.	Lichtenfels, Greenland, Aug. 28.	R. B. Sharpe, Esq. [P.].
r'. Juv. sk.	S. Paul's Island, Alaska, May 7 (*H. W. Elliot*; Sm. no. 62412).	U. S. Nat. Museum [P.].
s'. ♂ ad. sk.	Point Barrow, Alaska, July 24 (*M. Smith*; Sm. no. 93155).	U. S. Nat. Museum [P.].
t'. Ad. sk.	Whalefish Islands.	The Admiralty [P.].
u'. Imm. sk.	N.W. America.	Capts. Kellett and Wood [P.].
v'. Juv. sk.	N.W. America.	Capt. Collinson [P.].
w'. ♂ ad. sk.	N.W. America.	Capt. Collinson [P.].

x'. Juv. sk.	Fort Dufferin, Manitoba (*G. Dawson*).	N. A. Boundary Commission.
y'. ♂ ad. sk.	Fort Randall, Upper Missouri River, Jan. 26 (*E. Coues*; Sm. no. 63456).	U. S. Nat. Museum [P.].
z'. ♂ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
α. ♂ ad. sk.	Lapierre's House.	B. R. Ross, Esq. [P.].
β. ♂ ad. sk.	Fort Good Hope.	B. R. Ross, Esq. [P.].
γ. ♂ ad. sk.	Chicago, Ill., Jan. 29 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
δ. ♀ ad. sk.	Chicago, April 5 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
ε. ♀ ad. sk.	Albany, New York (*Hurst*).	Sclater Coll.
ζ. ♂ ad. sk.	Bangor, Maine, Feb. 18, 1885.	H. K. Coale, Esq. [P.].
η. ♂ ad. sk.	Sterling, Mass. (*Mrs. Bonney*).	H. K. Coale, Esq. [P.].
θ. ♀ ad. sk.	Worcester, Mass., Dec. 20, 1882.	R. B. Sharpe, Esq. [P.].
ι. Ad. sk.	Bitter Root Valley (*J. Pearsall*; Sm. no. 17636).	Salvin-Godman Coll.
κ. ♀ ad. sk.	Deer Creek, Nebraska, March 4, 1860 (*Dr. F. V. Hayden*; Sm. no. 19240).	Salvin-Godman Coll.
λ, *μ*. Ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
ν, *ξ*. ♂; *ο*, *π*. ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
ρ, *σ*. Juv. sk.	California.	Lord Walsingham [P.].
υ. Skeleton.	Europe.	Purchased.
φ. Skeleton.	Europe.	Purchased.
χ, *ψ*. Sterna.	England.	John Ingall, Esq. [P.].
ω. Sternum.	England.	J. Ray, Esq. [P.].

2. Plectrophenax hyperboreus.

Plectrophenax hyperboreus, *Ridgw. Proc. U. S. Nat. Mus.* vii. p. 68 (1884); *A. O. U. Check-list N. Amer. B.* p. 263 (1886).

Adult male in spring. Entirely pure white, except the terminal portion of the five outer primaries, which are chiefly black, for the space of about 1·40 inch from the tip of the longest quill. Tail pure white, the middle rectrices with a very small blackish spot near the end of the inner web (almost obsolete on one feather). Bill dull brownish, the tip dusky; legs and feet deep black. Wing 4·65, tail 3·10, culmen 0·45, tarsus 0·90, middle toe 0·60. (*Ridgway.*)

Adult male in winter. Like the spring plumage described above, but the pileum strongly tinged with rusty brown, the auriculars washed with a paler shade of the same, and the jugulum with a very faintly marked pale rusty collar, more distinct (but still faint) on each side; lower back and rump also faintly washed with pale rusty. Black spots near ends of inner webs of middle rectrices more distinct, and black on ends of primaries rather more extended, that on inner web of outer quill reaching about 1·70 from the tip.

Bill wax-yellow, with dusky tip to the maxilla. Wing 4·60, tail 3·15, culmen 0·40, tarsus 0·95, middle toe 0·60. (*Ridgway.*)

Adult female in spring. General colour white, the pileum and auriculars tinged with rusty, the nape and back faintly washed with pale buff yellowish, and back very narrowly streaked with dusky, but these narrow streaks rapidly widening toward the roots of the feathers, so as to form the predominating colour of the concealed portion; scapulars more strongly tinged with ochraceous, and with still broader concealed dusky acuminate spots, but without distinct streaks on the surface. Tertials with the central part of the exposed portion blackish, the very broad marginal part light dull ochraceous, becoming nearly white at the tips of the feathers; alulæ dull black, bordered with white; primary-coverts similar, but greater portions of inner webs white; longer primaries chiefly dusky greyish, distinctly bordered with white and with basal half or more of inner webs wholly white; on the shorter primaries this dusky rapidly decreasing in extent until on the innermost quill there is a mere trace near the tip of the outer web. Four middle rectrices brownish dusky, bordered with white; rest of the tail white, but all the feathers with more or less of a dusky streak near end of the outer web. Bill brownish wax-yellow, the culmen dusky; feet brownish black. Wing 4·25, tail 2·90, culmen 0·45, tarsus 0·85, middle toe 0·60. (*Ridgway.*)

Adult female in winter. Similar to the spring plumage as described above, but upper parts much more strongly washed with rusty, this deepest on the pileum and auriculars, but also pervading the nape, whole back, and scapulars, and, but less uniformly, the rump; an interrupted or broken jugular collar of rusty touches or cloudings; broad margins of the tertials deep cinnamon. Bill paler and purer wax-yellow, without black on culmen; feet deep black. Wing 4·25, tail 2·90, culmen 0·40, tarsus 0·87, middle toe 0·58.

The fully adult male may be at once distinguished from that of *P. nivalis* by the total absence of black except on the terminal third (or less) of the primaries and near the ends of the middle rectrices. In *P. nivalis* the primaries are black nearly to the base, the alulæ, primary-coverts, and tertials also black (though bordered with white), the dorsal region mainly black (wholly black in summer), and the six middle rectrices black to the base. The rusty wash is also much paler in the new form. In its summer plumage, except the black quill-tips, it would evidently be snow-white, the bill black instead of yellow. The females are distinguished from those of *P. nivalis* by their much paler coloration, with the dark markings far more restricted, and the rusty wash of the winter dress much less distinct. All of the four specimens of this sex have the back white, more or less tinged or stained with yellowish (more rusty on the scapulars), and narrowly streaked with black, although these streaks are nearly obsolete in one specimen. (*Ridgway, l. c.*)

Hab. Alaska.

58. CALCARIUS.

Type.

Calcarius, *Bechst. Orn. Taschenb.* p. 130 (1802)..... C. lapponicus.
Plectrophanes, *Meyer, Vög. Liv- u. Esthl.* p. xii (1815) C. lapponicus.
Centrophanes, *Kaup, Natürl. Syst.* pp. 154, 158 (1829).. C. lapponicus.

Cf. *Stejneger, Proc. U. S. Nat. Mus.* v. p. 23.

Foot of *Calcarius lapponicus.*

Range. Northern portions of both Hemispheres, going south in winter.

Key to the Species.

a. Throat black; sides of breast mottled with black; breast otherwise white; penultimate tail-feather with only a small wedge-shaped mark of white at the end; hind neck rufous..... *lapponicus*, p. 579.

b. Throat ochreous buff.

a'. Entire throat and breast black; a rufous collar round the hiud neck; penultimate and outer tail-feathers white, excepting for a small dusky line near the end of the outer web.... *ornatus*, p. 586.

b'. No black on the breast, which is ochreous buff like the throat; hind neck ochreous buff; penultimate tail-feather white, with a large oblique mark of black on the inner web as well as a mark near the end of the outer web *pictus*, p. 584.

1. Calcarius lapponicus.

? The Greater Bunting, *Albin, Nat. Hist. Birds*, pl. 63*.
Le Pinçon de Montagne, *Briss. Orn.* iii. p. 160 (1760).
Fringilla lapponica, *Linn. Syst. Nat.* i. p. 317 (1766); *Meyer u. Wolf, Taschenb.* i. p. 176 (1810).
Fringilla calcarata, *Pall. Reise Russ. Reichs*, ii. p. 710, pl. E (1773).
Le Grand Montain, *Montb. Hist. Nat. Ois.* iv. p. 134 (1778).
Laplard Finch, *Lath. Gen. Syn.* ii. pt. i. p. 263 (1783).
Passer calcaratus, *Pall. Zoogr. Rosso-Asiat.* ii. p. 18 (1811).
Hortulanus montanus, *Leach, Syst. Cat. Mamm. etc. Brit. Mus.* p. 16 (1816).
Passerina lapponica, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 12 (1817).
Emberiza calcarata, *Temm. Man. d'Orn.* p. 322 (1820); *Werner, Atlas, Granivores*, pl. 29 (1827); *Crespon, Orn. Gard*, p. 232

* This plate is generally referred to the Lapland Bunting; but, in my opinion, it is not recognizable as such.

(1840); *Kjærb. Orn. Dan.* pl. 54. fig. 2 (1852); *Fallon, Ois. Belg.* p. 90 (1875).

Plectrophanes calcaratus, *Meyer, Zus. etc. Meyer u. Wolf, Taschenb.* p. 56 (1822); *Boie, Isis,* 1822, p. 554; *Brehm, Vög. Deutschl.* p. 307 (1831); *Schl. Rev. Crit.* p. lxxii (1844); *Homeyer & Tancré, MT. orn. Ver. Wien,* 1883, p. 90.

Emberiza lapponica, *Naum. Vög. Deutschl.* iv. pl. 108 (1824); *Bp. Amer. Orn.* ii. p. 53, pl. 13. figs. 2, 3 (1828); *Audub. B. Amer.* pl. 365; *id. Orn. Biogr.* iv. p. 472 (1838); *Schl. Vog. Nederl.* pl. 160 (1854); *Smdev. Sv. Fogl.* pl. 7. figs. 3, 4 (1858); *Schl. Dier. Nederl.* pl. 15. figs. 12, 13 (1861); *Gray, Hand-l. B.* ii. p. 116, no. 7728 (1870); *Harting, Handb. Brit. B.* p. 25 (1872); *Cordeaux, Ibis,* 1875, p. 182; *Seebohm, Ibis,* 1882, p. 379; *id. Hist. Brit. B.* ii. p. 131 (1883).

Plectrophanes lapponica, *Selby, Trans. Linn. Soc.* xv. p. 156, cum tab. (1827); *Jard. ed. Wils. Amer. Orn.* iii. p. 413 (1832); *Gould, B. Eur.* iii. pl. 169 (1837); *Macgill. Hist. Brit. B.* i. p. 469 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 36 (1838); *Keys. u. Blas. Wirb. Eur.* p. 154 (1840); *Audub. B. Amer.* p. 50, pl. 152 (1841); *Selys-Longch. Faun. Belg.* p. 83 (1842); *Yarr. Brit. B.* i. p. 421 (1843); *Bp. Consp.* i. p. 462 (1850); *Middend. Sibir. Reis., Zool.* p. 136 (1851); *Hewits. Eggs Brit. B.* i. p. 182, pl. 46. fig. 2 (1856); *Baird, B. N. Amer.* i. p. 433 (1858); *Jaub. et Barth.-Laponm. Rich. Orn.* p. 172 (1859); *Schrenck, Reis. Amurl.* p. 276 (1859); *Walker, Ibis,* 1860, p. 166; *Reinh. Ibis,* 1861, p. 7; *Swinh. t. c.* p. 334; *Blakist. Ibis,* 1862, p. 6; *Scl. Cat. Amer. B.* p. 121 (1862); *Gray, List Brit. B.* p. 105 (1863); *Radde, Reis. Sibir., Vög.* p. 156 (1863); *Blakist. Ibis,* 1863, p. 72; *Baird, Ibis,* 1867, pp. 281, 286; *Degl. et Gerbe, Orn. Eur.* i. p. 334 (1867); *Dall & Bann. Trans. Chicago Acad.* i. p. 283 (1869); *Borggr. Vogelf. Norddeutschl.* p. 71 (1869); *Cooper, Orn. Calif.* p. 178 (1870); *Salvad. Faun. Ital., Ucc.* p. 145 (1871); *R. Gray, B. West Scotl.* p. 125 (1871); *Dresser, B. Eur.* iv. p. 253, pl. 223 (1872); *Finsch, Abhandl. nat. Ver. Bremen,* iii. p. 54 (1872); *Coues, Key N. Amer. B.* p. 134 (1872); *id. B. N.-West,* p. 120 (1874); *Baird, Brewer, & Ridgway, Hist. N. Amer. B.* i. p. 515, pl. 24. fig. 7 (1874); *Seebohm & Harvie-Brown, Ibis,* 1876, p. 117; *Newton, ed. Yarr. Brit. B.* ii. p. 15 (1876); *Harting, Faun. Prybilov Isl.* p. 17 (1875); *Tacz. Bull. Soc. Zool. France,* i. p. 174 (1876); *Finsch, Ibis,* 1877, p. 59; *Seebohm, Ibis,* 1878, p. 341; *Adams, t. c.* p. 425; *Finsch, Reis. West-Sibir.* xxix. p. 220 (1879); *Giglioli, Ibis,* 1881, p. 202; *Tacz. Bull. Soc. Zool. France,* vii. p. 392 (1882); *Salvin, Cat. Strickl. Coll.* p. 240 (1882); *Seton, Auk,* i. p. 23 (1885).

Calcarius lapponicus, *Bechst. Orn. Taschenb.* p. 130 (1802); *Stejneger, Proc. U. S. Nat. Mus.* v. p. 33 (1882); *id. Auk,* i. p. 117 (1884); *id. Bull. U. S. Nat. Mus.* no. 29, p. 250 (1885); *A. O. U. Check-list N. Amer. B.* p. 263 (1886).

Centrophanes lapponica, *Kaup, Natürl. Syst.* pp. 158, 192 (1829); *Gray, Gen. B.* ii. p. 379 (1844); *Cab. Mus. Hein.* Th. i. p. 127 (1850); *Fritsch, Vög. Eur.* tab. 25. figs. 22, 23 (c. 1870); *Swinh. P. Z. S.* 1871, p. 389; *Gould, B. Gt. Br.* iii. pl. 30 (1873); *Tacz. Bull. Soc. Zool. France,* i. p. 174 (1876); *David & Oust. Ois. Chine,* p. 320 (1877); *Coues, Check-list N. Amer. B.* p. 51 (1882); *Nelson, Cruise R. S. 'Corwin,'* p. 69 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 357 (1884); *Murdoch, Exped. Pt. Barrow, Birds,* p. 106 (1885); *Drew, Auk,* ii. p. 16 (1885).

Plectrophanes grœnlandicus, *Brehm, Vög. Deutschl.* p. 307 (1831).

Adult male in summer plumage. General colour above black, streaked on the back with rufous or creamy white, with which colours the feathers are edged; lesser and median wing-coverts blackish, edged with isabelline or creamy whitish; greater coverts like the scapulars, blackish, margined with pale rufous; bastard-wing, primary-coverts, and quills blackish, externally edged with ashy brown or whitish, the secondaries with rufous; rump and upper tail-coverts like the back, the latter rather broadly edged with creamy white; tail-feathers dark brown, edged with ashy whitish; the outer feather for the most part white, except for a small spot of brown near the end of the outer web, and a large oblique brown mark towards the base of the inner web; penultimate feather with a small wedge-shaped spot of white at the end; crown of head black, with a few creamy-white tips to the feathers of the occiput, separated from the mantle by a broad collar of bright chestnut occupying the entire hind neck and sides of neck; a broad white eyebrow of creamy buff; lores, feathers round the eye, ear-coverts, cheeks, and entire throat black, extending down each side of the breast; from behind the ear-coverts a line of creamy white extending from the eyebrow on the sides of the breast, where it widens out and forms a patch; on the sides of the upper breast a small patch of brown; remainder of under surface of body creamy white, the flanks streaked with black; thighs brown; axillaries and under wing-coverts white; quills pale brown below, light ashy rufous along the inner web: "feet brownish black; iris dark brown" (*Stejneger*). Total length 6 inches, culmen 0·4, wing 3·5, tail 2·35, tarsus 0·75.

In some old males in breeding-dress there is a narrow collar of creamy white separating the black head from the chestnut hind neck, and uniting with the eyebrow and white neck-patch on either side of the head. This is only apparent when the plumage gets worn, allowing the white bases to the chestnut plumes on the nape to show, whereas in fresh-plumaged specimens these are hidden by the black feathers of the hinder crown.

Adult female in breeding-plumage. Differs from the male in wanting the black head and rufous collar, the latter being replaced by a slight shade of rufous on the hinder neck and sides of neck, both of which are mottled with small black spots; crown of head black, with fulvous edges to the feathers and a mesial line of fulvous white down the centre of the head; a creamy-buff eyebrow, narrowly streaked with blackish shaft-lines; ear-coverts brown, blackish on the upper and lower margins; behind them a whitish patch on the sides of the neck; cheeks, throat, and underparts creamy white, with a distinct malar line of black, extending down on to the fore neck and chest, which are also black, concealed by whitish tips to the feathers; sides of body and flanks streaked with black; thighs brown; axillaries and under wing-coverts white; quills dusky below, ashy along the inner web: "bill brownish yellow, with blackish tips; feet dark brown" (*Stejneger*). Total length 6 inches, culmen 0·45, wing 3·5, tail 2·45, tarsus 0·8.

Young. General colour above tawny yellowish, thickly streaked with black centres to the feathers, the head like the back, the hind neck paler and more narrowly streaked; lesser and median wing-coverts blackish, edged with white or sandy buff; greater coverts blackish, externally edged with chestnut and tipped with white; bastard-wing, primary-coverts, and quills dusky blackish, the secondaries edged with chestnut like the greater coverts, paler and more rufous on the primaries, ashy rufous on the first one; tail-feathers blackish, edged with rufous, the outermost feather dull whitish, with a brown spot near the end of the outer web and a larger mark on the inner web, the penultimate feather with a wedge-shaped whitish mark on the inner web; a distinct superciliary streak of ashy whitish with black streaks; lores and eyelids whitish; ear-coverts yellowish buff, streaked with black, behind them a whitish patch down the sides of the neck; cheeks and throat white, separated by a malar line of black; fore neck, breast, and sides of body yellowish buff, minutely streaked with black; abdomen and under tail-coverts dull whitish; thighs yellowish buff; axillaries and under wing-coverts white: "bill reddish grey, black on tip of upper mandible; feet dark brownish grey; iris dark hazel" (*Stejneger*). In the above plumage the young bird remains till August, when it moults into its first winter dress. This is much more rufescent than the nestling plumage, the prevailing tone of which is yellowish.

The *young male in first winter plumage* bears a general resemblance to the adult female, and has the head only a trifle paler than the back, streaked with black, more pronounced on the sides of the crown; the rufous collar on the hind neck is traceable, but is entirely obscured by sandy-buff margins to the feathers; the eyebrow is sandy buff, as also the ear-coverts; the white patch on the side of the neck can be plainly seen; the general tone of the under surface is fulvescent, the throat whiter, the fore neck, chest, and sides of body sandy buff, with a black patch on the fore neck concealed by sandy-buff tips to the feathers.

Young females in winter plumage are much paler than old females, and have much broader rufous margins to the coverts and quills; lores and eyebrow creamy buff; under surface buffy white, narrowly streaked on the sides with brown, with a few slight streaks on the fore neck, but showing no moustachial streak.

The *old female in winter plumage* differs from the summer plumage in being much paler, with broader light margins to the feathers and the rufous on the hind neck scarcely indicated; under surface of body creamy white, the black on the malar region and on the fore neck perceptible, but more or less obscured by whitish edges to the feathers, the fore neck appearing streaked with black; the flanks also broadly streaked with black.

The *adult male in winter plumage* differs from the summer plumage in having the whole of the characteristic black and rufous coloration obscured by sandy-rufous edges to the feathers; the head is like the back, the feathers being margined with sandy buff, which gradually wears off, leaving the black pure; remains of these pale edgings are

generally seen on the nape of full-plumaged males. The eyebrow and neck-patch are washed with sandy buff; the ear-coverts are sandy buff, with a black patch on their hinder margin; the under surface is creamy white, the black on the cheeks, throat, and fore neck being traceable below the pale margins of the feathers.

Hab. Breeding in the high north of both hemispheres, descending southward in winter.

a. ♂ ad. sk.	Iceland.	Gould Coll.
b. ♂ ad. sk.	Vadso, East Finmark, June 30, 1874.	H. Seebohm, Esq. [P.].
c. ♀ ad. sk.	Vadso, July 1.	H. Seebohm, Esq. [P.].
d. ♂ ad. sk.	Vadso, June 30 (*R. Collett*).	Christiania Mus. [P.].
e. ♂ ad.; *f.* ♂ juv. sk.	Porsanger, July (*R. Collett*).	Christiania Mus. [P.].
g. ♂ ad. sk.	Lapland.	Salvin-Godman Coll.
h. ♂ ad. sk.	Lapland (*H. Wheelwright*).	Gould Coll.
i. Juv. sk.	Quickiock, Lapland, July 20 (*H. Wheelwright*).	Gould Coll.
k. ♂ ad. sk.	Archangel (*Meves*).	Salvin-Godman Coll.
l, m. ♂ ad. sk.	Archangel, May 1876.	Hume Coll.
n. ♂ ad. sk.	Alexievka, Petchora River, June (*J. A. H. B.*).	Col. Feilden and J. A. Harvie Brown, Esq. [P.].
o. ♂ ad. sk.	Alexievka, June 22.	H. Seebohm, Esq. [P.].
p. ♀ ad. sk.	Ust Zylma, May 27.	H. Seebohm, Esq. [P.].
q. Pull. sk.	Schtschutschja Tuudra, July 25 (*O. Finsch*).	Geogr. Soc. Bremen.
r. ♂ sk.	Ugorskia Jurti, Sept. 11 (*O. Finsch*).	Geogr. Soc. Bremen.
s. ♂ ad. st.	Siberia.	Moscow Mus. [P.].
t. ♂ ad. sk.	Siberia.	Moscow Mus. [P.].
u. ♂ ad. sk.	S. Michael's, Alaska, June 12, 1876 (*L. M. Turner*; Sm. no. 76870).	U. S. Nat. Mus. [P.].
v. ♂ ad. sk.	Nushagak (*C. L. McKay*; Sm. no. 86536).	H. K. Coale, Esq. [P.].
w, x. ♂ ♀ ad. sk.	Fort Anderson (*R. McFarlane*).	U. S. Nat. Mus. [P.].
y. ♀ ad. sk.	Island in Franklin's Bay, July 4, 1864 (*R. McFarlane*; Sm. no. 43269).	Salvin-Godman Coll.
z. ♀ ad. sk.	S. George's Island, Alaska (*H. W. Elliot*; Sm. no. 64206).	U. S. Nat. Mus. [P.].
a'. ♂ ad. sk.	Point Barrow, May 30, 1882 (*Smith*; Sm. no. 88757).	U. S. Nat. Mus. [P.].
b', c'. ♂ ♀ ad. sk.	Fort Simpson, May 1862 (*B. R. Ross*; Sm. nos. 27366, 27377)	Salvin-Godman Coll.

d'. ♂; *e'*, *f'*. ♀ ad. et juv. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
g'. ♂ ad. sk.	Fort George, Hudson's Bay, May 30, 1861.	Gould Coll.
h'. ♂ ad. st.	Repulse Bay.	Dr. Rae [P.].
i'. ♀ ad. sk.	Repulse Bay.	Dr. Rae [P.].
k'. ♂ ad. st.	Mitchell's Bay, Ontario, May.	Capt. Clark Kennedy.
l', *m'*. ♂ ad. sk.	Mitchell's Bay, Ontario, May.	Capt. Clark Kennedy.
n'. ♀ ad. sk.	49th Parallel, May 20, 1874 (*G. Dawson*).	N.A. Boundary Commission [P.].
o'. ♂; *p'*, *q'*. ♀ ad. sk.	Du Page Co., Illinois, Dec. 20, 1883 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
r'. ♀ imm. sk.	Chicago, Illinois, Oct. 2, 1883 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
s'. ♂ ad. sk.	Englewood, Illinois, April 19, 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
t'. ♂ imm. sk.	Champaign, Illinois, Jan. 27, 1877 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
u'. ♀ juv. sk.	Dekalb, Illinois, Dec. 20, 1884.	H. K. Coale, Esq. [P.].
v'. ♂ imm. sk.	Mt. Carmel, Illinois, Jan. 14, 1874 (*S. Turner*; Sm. no. 85381).	Salvin-Godman Coll.
w'. ♂ ad. sk.	Cook Co., Illinois, March 19, 1870 (*Greene Smith*; Sm. no. 77193).	U. S. Nat. Mus. [P.].
x', *y'*, *z'*. ♂ ad.; *a*. ♀ ad. sk.	Larned, Pawnee Co., Kansas, Feb. 26, 1885 (*G. C. Waterman*).	R. B. Sharpe, Esq. [P.].
β. ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
γ, *δ*. ♂ ♀ ad. sk.	Greenland.	Gould Coll.
ε, *ζ*. ♂ ♀ ad. sk.	Greenland (*Holboell*).	Salvin-Godman Coll.
η, *θ*, *ι*. ♂; *κ*. ♀ ad. sk.	Ichang Gorge, Yangtze River.	C. Maries, Esq. [C.].
λ. ♀ ad. sk.	Tientsin, China, Nov. 1860 (*R. Swinhoe*).	Salvin-Godman Coll.
μ. Skeleton.	England.	Purchased.

2. Calcarius pictus.

Emberiza (Plectrophanes) picta, *Swains. Faun. Bor.-Amer., Birds*, p. 250, pl. 49 (1831).

Emberiza picta, *Audub. B. Amer.* pl. 400; *id. Orn. Biogr.* v. p. 91 (1839); *Gray, Hand-l. B.* ii. p. 116, no. 7729 (1870).

Plectrophanes pictus, *Bp. Comp. List B. Eur. & N. Amer.* p. 37 (1838); *Audub. B. Amer.* iii. p. 52, pl. 153 (1841); *Gray, Gen. B.* ii. p. 379 (1844); *Bp. Consp.* i. p. 463 (1850); *Baird, B. N. Amer.* p. 434 (1858); *Scl. Cat. Amer. B.* p. 121 (1862); *Blakist. Ibis*, 1862, p. 6, 1863, p. 72; *Dall & Bann. Trans. Chicago Acad.* i. p. 283 (1867); *Coues, Key N. Amer. B.* p. 134 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 518, pl. 24. figs. 4, 5 (1874); *Coues, B. N.-West*, p. 121 (1874); *Maynard, B. Florida*, p. 519 (1881); *Seton, Auk*, i. p. 23 (1884).

Plectrophanes smithii, *Audub. B. Amer.* vii. p. 337, pl. 487 (1844); *Bp. Consp.* i. p. 463 (1850).

Centrophanes pictus, *Cab. Mus. Hein.* Th. i. p. 127 (1850); *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 22 (1881); *Coues, Check-list*, p. 51 (1882); *id. Key N. Amer. B.* 2nd ed. p. 358 (1884); *Agersb. Auk*, ii. p. 281 (1885).
Centrophanes smithii, *Cab. Mus. Hein.* Th. i. p. 127, note (1850).
Calcarius pictus, *Stejneger, Pr. U. S. Nat. Mus.* v. p. 33 (1882); *Seton, Auk*, iii. p. 323 (1886); *A. O. U. Check-list N. Amer. B.* p. 263 (1886).

Adult male. General colour above ochreous buff, thickly mottled with black centres to the feathers, those of the mantle and upper back with whitish edgings; lesser wing-coverts black, broadly tipped with white; median and greater coverts blackish brown, edged with light brown and whitish towards the ends; bastard-wing, primary-coverts, and quills blackish brown, edged with light brown, rufescent on the secondaries, the primaries margined with white, and the inner secondaries fringed with white at the ends; upper tail-coverts dark brown, edged with rufous-brown; tail-feathers blackish brown, edged with lighter brown, the two outer feathers almost entirely white, with an oblique blackish mark near the end of the inner web, and edged with blackish near the tip of the outer web; crown of head black, with more or less remains of sandy margins to the feathers; an occipital patch of white, varying in size; nape and hind neck deep ochreous buff, forming a collar, the ochreous shade overspreading the mantle; lores and a very broad eyebrow white; eyelid also white; feathers below the eye and ear-coverts black, with a large patch of white in the middle; cheeks white, forming a moustache which widens out a little on the sides of the neck; throat, sides of neck, and under surface of body deep ochre, a little paler on the abdomen; sides of body and flanks paler ochre, streaked with reddish brown or black; thighs and under tail-coverts whitish; under wing-coverts and axillaries white; quills below ashy, whitish along the edge of the inner web: "bill dusky, paler at the base beneath; legs brown" (*J. Richardson*). Total length 6 inches, culmen 0·5, wing 3·55, tail 2·2, tarsus 0·75.

In the *full summer plumage* the pale edges of the feathers of the upper surface become worn off, so that the general aspect of the back is very dark, the head being entirely black. In a specimen in breeding-plumage, collected by Dr. Rae, the third feather has a median line of white for its whole length, as well as the two outer feathers.

Adult female. Very similar to the male, but not so richly coloured; the ochre colour of the hind neck and underparts lighter; head like the back and similarly pale-margined; hind neck minutely spotted with brown; the throat separated from the white cheeks by a malar line of brown; sides of body and flanks broadly streaked with brown. Total length 6 inches, culmen 0·45, wing 3·45, tail 2·2, tarsus 0·7.

Some female birds have the collar on the hind neck very faintly indicated and are sandy buff underneath, with spots on the fore neck. These are probably birds of the previous year.

Hab. Interior of North America from the Arctic coast to Illinois and Texas, breeding far north (*A. O. U. Check-list*, p. 263).

a, b. ♂ ♀ ad. sk.	Repulse Bay.	Dr. Rae [P.].
c. ♂ ad. sk.	Arctic America, June 20 (*R. McFarlane*; Sm. no. 31502).	U. S. Nat. Mus. [P.].
d, e. ♂ ♀ ad. sk.	Fort Anderson (*R. McFarlane*).	U. S. Nat. Mus. [P.].
f. ♀ ad. sk.	Fort Anderson, June 1864 (*R. McFarlane*; Sm. no. 43286).	Salvin-Godman Coll.
g. ♀ ad. sk.	Near Rendezvous Lake, June 24 (*R. McFarlane*; Sm. no. 43293).	U. S. Nat. Mus. [P.].
h, i, k. ♂; *l.* ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
m. ♂ ad. sk.	Fort Simpson, May 26, 1862 (*B. R. Ross*; Sm. no. 27417).	Salvin-Godman Coll.
n. ♂ ad. sk.	Slave Lake (*R. Kennicott*; Sm. no. 19674).	Sclater Coll.
o. ♀ ad. sk.	Riverside, Illinois, April 3, 1875 (*E. W. Nelson*).	H. K. Coale, Esq. [P.].

3. Calcarius ornatus.

Plectrophanes ornatus, *Towns. Journ. Philad. Acad.* vii. p. 189 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 37 (1838); *Audub. B. Amer.* 8vo, iii. p. 53, pl. 154 (1841); *Gray, Gen. B.* ii. p. 379 (1844); *Bp. Consp.* i. p. 463 (1850); *Baird, B. N. Amer.* p. 435 (1858); *Blakist. Ibis*, 1862, p. 6, 1863, p. 74; *Dresser, Ibis*, 1865, p. 486; *Allen, Bull. Mus. Comp. Zool.* iii. p. 135 (1872); *Coues, Key N. Amer. B.* p. 134 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 520 (1874); *Coues, B. N.-West*, p. 122 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 250 (1875); *Coues, Bull. U. S. Geol. Surv.* iv. p. 582 (1878); *McChesney, op. cit.* v. p. 76 (1880).

Emberiza ornata, *Audub. B. Amer.* pl. 394; *id. Orn. Biogr.* v. p. 44 (1839); *Gray, Hand-l. B.* ii. p. 116, no. 7730 (1870).

Centrophanes ornatus, *Cab. Mus. Hein.* Th. i. p. 127 (1850); *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 22 (1881); *Coues, Check-list N. Amer. B.* p. 51 (1882); *id. Key N. Amer. B.* 2nd ed. p. 358 (1884); *Agersb. Auk*, ii. p. 281 (1885); *Drew, t. c.* p. 16; *Hensh. t. c.* p. 333.

Plectrophanes melanomus, *Baird, B. N. Amer.* p. 436, pl. 74. fig. 2 (1858); *Scl. P. Z. S.* 1860, p. 251, 1884, p. 174; *id. Cat. Amer. B.* p. 121 (1862); *Dresser, Ibis*, 1865, p. 486; *Coues, Proc. Philad. Acad.* 1866, p. 84; *Sumichr. Mem. Bost. Soc.* i. p. 551 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 54 (1873).

Emberiza melanomus, *Gray, Hand-l. B.* ii. p. 116, no. 7731 (1870).

Plectrophanes ornatus, var. melanomus, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 521, pl. 24. fig. 6 (1874).

Calcarius ornatus, *Stejneger, Proc. U. S. Nat. Mus.* v. p. 33 (1882); *Seton, Auk*, iii. p. 323 (1886); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 419 (1886); *A. O. U. Check-list N. Amer. B.* p. 263 (1886).

Adult male. General colour above brown, much mottled with black centres to the feathers of the mantle and back; rump rather more ashy, the feathers edged with hoary grey, the centres black; lesser wing-coverts black, the innermost with broad white tips; median coverts black, edged with white; greater coverts brown, externally edged with whity brown, whitish towards the ends; bastard-wing brown, fringed with whity brown; primary-coverts and quills brown, edged with whity brown, the primaries with white, with which the secondaries are also margined at the tips; upper tail-coverts blackish, edged with ashy; two centre tail-feathers brown, the remainder white, with a broad brown band at the end, decreasing in size towards the two outermost, which have only a longitudinal brown mark near the end of the outer web; crown of head black, some of the feathers edged with white; on the occiput a patch of white; nape and hind neck bright chestnut, forming a broad collar; lores and a broad eyebrow white, as also the feathers round eye and eyelid; along the upper edge of the ear-coverts a black streak, descending in a patch behind the latter; cheeks, throat, and ear-coverts light ochreous buff; lower throat and sides of neck white; fore neck, chest, and breast black, some of the feathers edged with chestnut and some with white, especially on the latter; abdomen, vent, and under tail-coverts white; sides of body, flanks, and thighs ashy brown; under wing-coverts and axillaries white; quills below light brown, ashy along the inner edge: "bill yellow, with the tips dusky; feet and claws yellowish flesh-colour" (*Audubon*): "bill plumbeous brown above, lighter beneath; feet dusky brown; iris brown" (*H. W. Henshaw*). Total length 5·25 inches, culmen 0·45, wing 3·4, tail 2·25, tarsus 0·75.

Adult male in winter plumage. Much browner than the summer plumage, the black head and chestnut collar being brown, the full plumage being hidden by broad brown edges to the feathers, the black of the underparts being also obscured by broad sandy-buff margins to the feathers, underneath which the full plumage can be traced.

Adult female. Different from the male and much browner, the crown being like the back, with similar blackish-brown centres to the feathers; the chestnut collar of the male replaced by a mere tinge of rufous on the hind neck, the feathers being spotted with brown; wing-coverts brown like the back, margined with whity brown, whitish on the greater series; quills brown, margined with lighter brown, white on the primaries; tail-feathers as in the male, but with more brown at the ends; lores and a distinct eyebrow dull white; sides of face and ear-coverts buffy whitish, with a brown streak along the upper edge of the ear-coverts, and joining a large brown patch behind the latter; cheeks and throat buffy whitish, separated from each other by a narrow malar streak of brown; remainder of under surface brown, the feathers mottled with lanceolate blackish centres, the middle of the breast having a black patch; under tail-coverts white; sides of body and flanks brown, indistinctly

streaked with darker brown; under wing-coverts and axillaries ashy white. Total length 5·25 inches, culmen 0·45, wing 3·15, tail 2·1, tarsus 0·8.

It is apparently only very old females which have the rufous on the hind neck or any black on the breast. More than one breeding hen bird in the collection lacks both these characters.

Young. Brown like the old female, but darker and mottled with hoary whitish edges to the feathers of the upper surface, the general appearance of which is Lark-like; facial markings as in the old female, excepting that the ear-coverts are spotted with brown; throat white; remainder of under surface of body sandy buff, the fore neck and chest streaked with black, the sides of the body and flanks mottled with blackish centres to the feathers; tail-feathers as in the adult, but with rather more brown on the outer webs.

The *young bird after the first moult* is like the old female on the upper surface, but is isabelline brown on the under surface, with a few dark brown streaks on the breast and flanks.

Hab. Interior of North America, from the Saskatchewan Plains south to Texas: rare west of Rocky Mountains; accidental in Massachusetts (*A. O. U. Check-list, l. c.*). South to Mexico.

a. ♂ ad. sk.	49th Parallel, May 28, 1874 (*G. Dawson*).	N.A. Boundary Commission [P.].
b. ♀ ad. sk.	49th Parallel, June 9, 1874 (*G. Dawson*).	N.A. Boundary Commission [P.].
c. ♂ ad.; *d.* Juv. sk.	Pembina, Dakota, July 14, 1873 (*E. Coues*; Sm. nos. 65629, 65633).	Salvin-Godman Coll.
e. ♀ ad. sk.	Great Bend of Heart River, Dakota, June 22, 1873 (*E. Coues*; Sm. no. 65121).	Salvin-Godman Coll.
f. ♂ ad.; *g.* Juv. sk.	Souris River, Sept. 3, 1873 (*E. Coues*; Sm. nos. 65650, 65668).	Salvin-Godman Coll.
h. ♀ ad. sk.	Souris River, Aug. 9, 1873 (*E. Coues*; Sm. no. 65640).	U. S. Nat. Museum.
i, k. ♂ ad. sk.	Hall Co., Nebraska, April 30, 1880 (*A. Hall*).	R. B. Sharpe, Esq. [P.].
l, m. ♂ ♀ ad. sk.	Hall Co., May 9, 1880 (*A. Hall*).	H. K. Coale, Esq. [P.].
n. ♂ ad. sk.	Larned, Pawnee Co., Kansas, Feb. 26, 1885 (*G. C. Waterman*).	H. K. Coale, Esq. [P.].
o. ♂ ad. sk.	Colorado, Oct. 4 (*C. E. Aitken*; Sm. no. 69479).	U. S. Nat. Museum [P.].
p. ♂ ad. sk.	Mexico (*De Saussure*).	Sclater Coll.
q. ♂ ad. sk.	Mexico (*A. Boucard*).	Salvin-Godman Coll.
r. ♂ ad.; *s.* Juv. sk.	Puebla, Mexico.	A. Boucard [C.].
t. ♂ ad.; *u.* Juv. sk.	Near the City of Mexico (*White*).	Salvin-Godman Coll.
v. ♂ ad.; *w.* ♀ jun. sk.	Vera Cruz, Mexico (*A. Sallé*).	Sclater Coll.

59. RHYNCOPHANES.

Type.
Rhyncophanes, *Baird, B. N. Amer.* p. 432 (1858) .... R. maccowni.

Range. Interior of North America, from the Saskatchewan Plains south to Texas and Mexico. Breeds from about the northern border of Western Kansas northward (cf. *A. O. U. Check-list*, ut infrà).

1. Rhyncophanes maccowni.

Plectrophanes maccowni, *Lawr. Ann. Lyc. N. Y.* v. p. 122 (1851); *Cass. Ill. B. Calif.* p. 228, pl. 39 (1856); *Bp. Rev. et Mag. de Zool.* 1857, p. 161; *Baird, B. N. Amer.* p. 437 (1858); *Dresser, Ibis*, 1865, p. 487; *Allen, Bull. Mus. C. Z.* iii. pp. 145, 177; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 523, pl. 24. fig. 1 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 252 (1875); *Maynard, B. Florida*, p. 519 (1883).

Emberiza maccowni, *Gray, Hand-l. B.* ii. p. 116, no. 7732 (1870).

Plectrophanes (Rhyncophanes) maccowni, *Coues, Key N. Amer. B.* p. 135 (1872).

Rhyncophanes maccowni, *Sennett, Bull. U. S. Geol. Surv.* iv. p. 16 (1878); *Coues, t. c.* p. 583; *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 23 (1881); *Coues, Check-list N. Amer. B.* p. 51 (1882); *id. Key N. Amer. B.* 2nd ed. p. 359 (1884); *Brown, Auk*, i. p. 121 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list N. Amer. B.* p. 264 (1886).

Adult male. General colour above brown, the feathers of the mantle and back centred with blackish brown; rump more ashy grey, as well as the upper tail-coverts, the latter broadly edged with hoary whitish; lesser wing-coverts ashy grey with blackish bases; median coverts bright chestnut, with concealed blackish bases; greater coverts brown, externally hoary grey, whitish on the margins; bastard-wing, primary-coverts, and quills dark brown, edged with ashy grey, hoary whitish on the margins of the secondaries, the primaries white along the outer web; centre tail-feathers brown, with ashy margins, the remainder white, with a blackish-brown bar at the end of all the feathers except the outermost, which has only a brown spot at the end of the outer web; crown of head black; the occiput and nape ashy, the feathers being tipped with this colour and resembling the hind neck, which is ashy grey; lores, a broad eyebrow, as well as the feathers round eye, white, becoming ashy grey on the ear-coverts; cheeks black, forming a broad moustachial streak; throat white; sides of neck white, washed with ashy; fore neck and chest black; breast ashy white, becoming purer white on the abdomen; sides of body and flanks dark ashy grey, slightly mottled with black centres to the feathers on the side of the breast; thighs dull ashy; under tail-coverts white; under wing-coverts and axillaries white; quills below ashy brown, white along the inner web: "bill brown and white; feet dark brown; iris brown" (*J. Cooper*). Total length 5·5 inches, culmen 0·5, wing 3·6, tail 2·15, tarsus 0·75.

In the *winter plumage* the black of the crown and breast is completely obscured by sandy-buff edgings to the feathers, which give a browner aspect to the entire plumage.

Adult female. Much browner than the male, the upper surface being brown, all the feathers broadly centred with blackish brown; the head like the back and similarly streaked; lesser wing-coverts like the back; median series rufous, hidden by fulvous edges, and having black shaft-stripes; remainder of wing as in the male, but rather browner on the quills and not so ashy; upper tail-coverts brown like the back: tail as in the male, but the dark brown tips to the feathers broader; lores and a broad eyebrow sandy buff; ear-coverts brown, with a patch of sandy buff in the middle; cheeks, throat, and breast sandy buff, with concealed black bases to the feathers of the fore neck and chest; lower breast and abdomen white, as also the under tail-coverts; sides of body and flanks sandy buff; under wing-coverts and axillaries white; quills ashy brown below, white along the inner web. Total length 5·4 inches, culmen 0·5, wing 3·4, tail 2·0, tarsus 0·7.

Young after first moult. Greatly resembles the old female, but has less rufous on the median wing-coverts, which are sandy brown at the ends like the greater coverts. *Young males* generally show the black of the head and chest concealed under the brown winter plumage.

Hab. The same as that of the genus.

a. ♂ ad. sk.	49th Parallel, June 16, 1874 (*G. Dawson*).	N. A. Boundary Commission [P.].
b. ♂ ad. sk.	Camp 14, near Hart River, Dakota, July 7, 1873 (*Dr. E. Coues*).	Salvin-Godman Coll.
c. ♂ ad. sd.	Champaign, Illinois, Jan. 15, 1877.	H. K. Coale, Esq. [P.].
d, *e*. ♂ ad. et juv. sk.	Larned, Pawnee Co., Kansas, Feb. 26, 1885 (*G. C. Waterman*).	R. B. Sharpe, Esq. [P.].
f. ♀ imm. sk.	Larned, March 1, 1883 (*G. C. W.*)	R. B. Sharpe, Esq. [P.].
g. Imm. sk.	Laramie Plains, Wyoming, Aug. 26, 1876 (*E. Coues*; Sm. no. 73000).	U. S. Nat. Mus. [P.].
h. Ad. sk.	Apache, Arizona, Oct. 21 (*H. W. Henshaw*; Sm. no. 69485).	U. S. Nat. Mus. [P.].
i. Ad. sk.	Mexico (*M. Verreaux*).	

60. CHONDESTES.

Type.

Chondestes, *Swains. Phil. Mag.* i. p. 435 (1827) ..... C. grammica.

Range. The same as that of the species (*vide infrà*).

1. Chondestes grammica.

Fringilla grammaca, *Say in Long's Exped.* i. p. 139 (1823); *Bp. Amer. Orn.* i. p. 47, pl. v. fig. 3 (1825).

Chondestes strigata, *Swains. Phil. Mag.* n. ser. i. p. 435 (1827); *id. Classif. B.* ii. p. 289 (1837).

Chondestes grammica*, *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *id. Consp.* i. p. 479 (1850); *Baird, B. N. Amer.* p. 456, (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 15 (1858); *Scl. P. Z. S.* 1859, p. 379; *id. Cat. Amer. B.* p. 121 (1862); *id. P. Z. S.* 1864, p. 174; *Dresser, Ibis*, 1865, p. 488; *Coues, Proc. Philad. Acad.* 1866, p. 84; *Dugès, La Nat.* i. p. 140 (1868); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Cooper, B. Calif.* p. 193 (1870); *Allen, Bull. Mus. C. Z.* iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 146 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 134 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 562 (1874); *Coues, B. N.-West*, p. 159 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 278 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 22 (1875); *Hensh. Rep. Zool. Exped.* 100*th Merid.* p. 259 (1875); *Sennett, Bull. U. S. Geol. Surv.* iv. p. 19 (1878); *Merrill, Proc. U. S. Nat. Mus.* i. p. 127 (1878); *Belding, t. c.* p. 415 (1879); *Sennett, Bull. U. S. Geol. Surv.* v. p. 391 (1879); *Cooper, Proc. U. S. Nat. Mus.* ii. p. 247 (1880); *Maynard, B. Florida*, p. 104 (1881); *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 23 (1881); *Salvin, Cat. Strickl. Coll.* p. 234 (1882); *Coues, Check-list N. Amer. B.* p. 57 (1882); *Brown, Auk*, i. p. 121 (1884); *Chapman, Auk*, iii. p. 136; *Seton, t. c.* p. 323; *Hensh. t. c.* p. 487; *Coues, Key N. Amer. B.* 2nd ed. p. 384 (1884); *A. O. U. Check-list N. Amer. B.* p. 270 (1886).

Emberiza grammaca, *Audub. Syn.* p. 101 (1839); *id. B. Amer.* 8vo, iii. p. 63, pl. 158 (1841).

Zonotrichia grammaca, *Gray, Gen. B.* ii. p. 374 (1849).

Calamospiza grammaca, *Gray, Hand-l. B.* ii. p. 111, no. 7670 (1870).

Chondestes grammica strigata, *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 24 (1881); *Belding, Proc. U. S. Nat. Mus.* v. p. 540 (1883); *id. op. cit.* vi. p. 343 (1883); *Drew, Auk*, ii. p. 16 (1885); *Beckh. t. c.* p. 141; *Brewster, Auk*, iii. p. 139 (1886); *Eversm. t. c.* p. 182; *A. O. U. Check-list N. Amer. B.* p. 270 (1886).

Adult male. General colour above brown, the mantle, upper back, and scapulars centred with black; lower back, rump, and upper tail-coverts uniform ashy brown, the latter with slightly indicated dusky streaks; lesser wing-coverts blackish, edged with ashy brown; median coverts blackish, broadly tipped with white, the inner ones tinged with rufous; greater coverts blackish, edged with ashy brown and narrowly tipped with white; bastard-wing and primary-coverts dark brown, edged with ashy brown; quills blackish brown, edged with paler brown, rufescent on the margins of the secondaries, the primaries edged with whitish, with a pale sandy rufous mark at the base of the outer web; centre tail-feathers brown, edged with lighter brown; the remainder black, tipped with white, increasing in extent towards the outer feather, which is white also along the outer web; crown of head whitish in the centre, ashy brown towards the nape, this mesial streak bordered

* Very often written *grammaca*, but, as shown by Dr. Coues, the proper orthography is *grammica*.

on each side by a band of chestnut, streaked with black along the sides of the crown; hind neck and sides of neck ashy brown; lores and a broad eyebrow whitish, as well as the eyelid, except in front and behind, where the latter is black like the black line which goes through the eye above the ear-coverts, which are chestnut; below the eye a line of white, and another behind the ear-coverts joining the cheeks, which are also white; before the ear-coverts a black mark; throat and under surface of body white, with a broad malar streak of black, and a few black spots on the fore neck; sides of body, flanks, and thighs pale ashy brown; under tail-coverts white; under wing-coverts and axillaries pale ashy brown, those near the edge of the wing mottled with blackish bases; quills below dusky, ashy along the inner edge: "bill reddish flesh-colour, the upper mandible tinged with dusky; feet and claws flesh-colour" (*Audubon*): bill bluish, the culmen and tip dusky; feet fleshy; iris brown" (*Sumichrast*). Total length 5·8 inches, culmen 0·55, wing 3·35, tail 2·4, tarsus 0·85.

The *adults in winter plumage* are generally browner than in summer, when there is an ashy tinge to the upper surface, and the margins to the wing-coverts are broader and more decidedly sandy buff; the black spots on the fore neck are less distinct.

The Western birds have been separated by Mr. Ridgway as *C. grammica strigata*, and are said to be distinguished by the more uniform and paler chestnut bands on the sides of the crown; but there seems to be such a complete connection between specimens of true *C. grammica* and *C. strigata*, that I have been unable to separate them.

Nearly all the specimens in winter plumage have some streaks on the hinder part of the chestnut bands on the sides of the crown; and I should like to see some more specimens of the true *S. grammica* to assure myself that the two races do not run into one another, as I firmly believe they do.

Young. Marked like the adult, but less distinctly streaked, and the rufous on the crown less pronounced; ear-coverts reddish brown, the black spots and facial markings as in the adult; sides of the breast with black spots, like those on the fore neck; wing-coverts more broadly edged with sandy buff.

The young bird is at first thickly spotted with black on the fore neck, breast, and sides of the body, the spots being very large and triangular; the sandy-buff ends to the wing-coverts are very large and distinct.

Hab. From the eastern edge of the prairies and even Iowa and Illinois to the Pacific States (*Coues*), south into Mexico and Guatemala.

a. ♂ ad. sk.	Chicago, Illinois, May 16, 1875 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
b. Juv. sk.	Riverside, Illinois, July 4, 1877 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. Juv. sk.	Hyde Park, Illinois, July 4, 1877 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d. ♀ ad. sk.	Fort Dufferin, Manitoba, June 23, 1873 (*G. Dawson*).	N.A. Boundary Commission [P.].

e, f. Ad. sk.	49th Parallel, July 6, 1877 (*G. Dawson*).	N. A. Boundary Commission [P.].
g. ♂ ad. sk.	Republican Fort, May 24, 1882 (*Dr. E. Coues*; Sm. no. 34381).	Salvin-Godman Coll.
h. ♀ ad. sk.	Fort Riley (*H. Brandt*; Sm. no. 20903).	Salvin-Godman Coll.
i. Pull. sk.	Utah, Salt Lake, July 1872 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
k. Ad. sk.	Clear Creek, Colorado, May 17, 1873 (*J. H. Batty*; Sm. no. 66045).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Red Bluff, Northern California, May 2, 1884 (*C. H. Townsend*; Sm. no. 98321).	U. S. Nat. Mus. [P.].
m. ♀ ad. sk.	N. California, June 11, 1883 (*C. H. Townsend*; Sm. no. 91688).	U. S. Nat. Mus. [P.].
n. ♀ ad. sk.	Fort Tejon, California, Aug. 9, 1857 (*C. J. Xantus*; Sm. no. 25560).	Salvin-Godman Coll.
o. Ad. sk.	Mexico.	U. S. Nat. Mus. [P.].
p. Ad. sk.	Mexico.	Sclater Coll.
q. Ad. sk.	Mazatlan, W. Mexico, Dec. 26 (*A. Forrer*).	Salvin-Godman Coll.
r. ♀ ad. sk.	Presidio, Mexico, Dec. 22 (*A. Forrer*).	Salvin-Godman Coll.
s. ♂ ad. sk.	Oaxaca, Mexico, Nov. 1860 (*A. Boucard*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Puebla, Mexico.	A. Boucard [C.].
u. Ad. sk.	Mexico.	J. Gould, Esq.
v. ♀ ad. sk.	Barranco Hondo, Guatemala, Oct. 22, 1873 (*O. S.*).	Salvin-Godman Coll.

61. CALAMOSPIZA.

	Type.
Calamospiza, *Bp. Comp. List B. Eur. & N. Amer.* p. 30 (1838)	C. bicolor.
Corydallina, *Audub. Syn.* p. 130 (1839)	C. bicolor.

Range. From the plains of Dakota and Middle Kansas west to the Rocky Mountains, less commonly thence to the Pacific, and south to Northern Mexico and Lower California. Accidental in Massachusetts. (*A. O. U. Check-list*, p. 290.)

1. Calamospiza bicolor.

Fringilla bicolor, *Towns. Journ. Philad. Acad.* vii. p. 189 (1837); *Audub. B. Amer.* pl. 390; *id. Orn. Biogr.* v. p. 19 (1839).

Calamospiza bicolor, *Bp. Comp. List B. Eur. & N. Amer.* p. 30 (1838); *id. Consp.* i. p. 475 (1850); *Baird, B. N. Amer.* p. 492 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 16 (1858); *Scl. Cat. Amer. B* p. 121 (1862); *Dugès, La Nat.* i. p. 140 (1868); *Cooper, B. Calif.* p. 225 (1870); *Gray, Hand-l. B.* ii. p. 111, no. 7669 (1870); *Allen, Bull. Mus. Comp. Zool.* iii. pp. 137, 177 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 34 (1873); *Baird, Brewer, &*

Ridgw. Hist. N. Amer. B. ii. p. 61, pl. 29. figs. 2, 3 (1874); *Coues, B. N.-West.* p. 147 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 295 (1875); *Coues, Bull. U.S. Geol. Surv.* iv. p. 597 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 127 (1878); *McChesney, Bull. U.S. Geol. Surv.* v. p. 77 (1880); *Sennett, t. c.* p. 391; *Maynard, B. Florida*, p. 519 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 27 (1881); *Coues, Check-list N. Amer. B.* p. 58 (1882); *Belding, Proc. U.S. Nat. Mus.* v. p. 541 (1883), vi. p. 343 (1883); *Holter, Auk*, i. p. 293 (1884); *Drew, Auk*, ii. p. 16 (1885); *Cooke, t. c.* p. 32; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 417 (1886).

Corydallina bicolor, *Audub. Syn.* p. 130 (1839); *id. B. Amer.* 8vo, iii. p. 195, pl. 202 (1841).

Dolichonyx bicolor, *Nutt. Man.* 2nd ed. p. 203 (1840).

Calamospiza melanocorys, *Stejn. Auk*, ii. p. 49 (1885); *A. O. U. Check-l. N. Amer. B.* p. 290 (1886); *Seton, Auk*, iii. p. 324 (1886).

Adult male. General colour above sooty black, including the lesser wing-coverts; the lower row of the latter and median coverts white, forming a broad band; greater coverts, bastard-wing, primary-coverts, and quills black, the latter edged with white, the secondaries more broadly; upper tail-coverts and tail-feathers black, the latter with a white spot at the end of the inner web; sides of face and entire under surface of body black, with white margins to the under tail-coverts; under wing-coverts and axillaries black: "bill light blue, upper mandible somewhat dusky along the ridge; feet and claws reddish brown" (*Audubon*). Total length 6·2 inches, culmen 0·65, wing 3·5, tail 2·45, tarsus 0·95.

Adult female. Different from the male. General colour above brown, streaked with darker brown centres to the feathers, which have ashy-brown margins on the mantle and upper back; rump more uniform brown; lesser wing-coverts ashy, with dusky centres; median and greater coverts creamy white, with blackish bases, the inner ones brown, edged with sandy buff; bastard-wing blackish brown; primary-coverts and quills brown, the primaries edged with white, as well as some of the outer secondaries, the inner secondaries edged with sandy buff; upper tail-coverts brown, with dusky shaft-streaks; tail-feathers blackish brown, edged with whity brown, the outer ones with a white spot at the end of the inner web, increasing towards the outermost, which is externally edged with white; crown of head rather more reddish brown, streaked with blackish-brown centres to the feathers, the centre of the crown rather more ashy; lores, a narrow eyebrow, and the feathers round the eye white; ear-coverts light brown, whity brown in the centre; cheeks white, with a blackish streak above and below; throat white, the chin black; sides of neck ashy brown, streaked with blackish brown; remainder of under surface of body white, streaked on the fore neck with black shaft-lines; in the centre of the chest a black spot; lower breast and abdomen uniform white; sides of body and flanks pale brown, rather more broadly streaked with blackish brown; thighs and under tail-coverts white, with black basal marks; under wing-coverts and axillaries brown, edged with ashy brown,

the edge of the wing black; quills below dusky, the inner edge ashy. Total length 5·8 inches, culmen 0·5, wing 3·15, tail 2·15, tarsus 0·9.

The specimen described was obtained with the nest and eggs by Dr. Coues on the 9th of July. Another female, obtained in June, differs from the one described only in wanting the black on the chin. This is also absent in a hen bird procured in August, and is probably the sign of a very old bird. The stripes on the breast and flanks vary somewhat in individuals, being much broader in some than in others; the moustachial streak is also broken up into spots in some specimens.

Young male. Resembles the old female at first, being brown above, but the scapulars are blackish, edged with dull white; the black centres to the feathers of the upper surface are broader and plainer, and the white edges to the quills are much more distinct than in the adult female.

The young bird at first resembles the nestling of a Lark, and has all the feathers margined with sandy buff, and is tinged with yellow underneath.

The full black plumage is assumed by a moult, but it is probable that at least two years elapse before the adult dress is gained. At all events the species has a spring moult, as specimens procured in May and June are in full process of change, renewing not only the body-feathers but the quills.

It would seem that from the nestling plumage the first moult of the male (*i. e.* into the *first winter plumage*) is into a nearly uniform brown dress, in general like that of the adult female, and having dusky centres to the feathers of the back; the general tone of the upper surface, however, inclines more to a rufous-brown. The wings are those of the adult male, the quills, primary-coverts, and bastard-wing being all black, but the remainder of the wing-coverts are washed with rufous, the white being replaced by creamy buff. The lores, sides of face, ear-coverts, and throat are almost entirely black, and many of the feathers on the breast have the central streak in process of widening out into a broad stripe, showing that a change in the pattern of the feather accompanies the moulting of the under surface.

The specimen described is one shot on the 11th of September, and it is quite likely that the full dress of the adult male is gained in the first spring, the pale brown quills seen in some specimens at that season of the year being the black feathers of the previous autumn, bleached by the wear and tear of a winter's usage.

Hab. The same as that of the genus.

a, b. ♂ ad.; *c.* ♀ ad. sk.	49th Parallel, June 1874 (*G. Dawson*).	N. A. Boundary Commission [P.].
d. ♂ juv. sk.	Three Buttes, Aug. 8, 1874 (*Dr. E. Coues*; Sm. no. 67572).	U.S. Nat. Mus. [P.].
e. ♀ ad. sk.	Frenchman's River, July 9, 1874 (*Dr. E. Coues*; Sm. no. 67577).	U.S. Nat. Mus. [P.].

f. ♀ ad. sk.	Custar's Creek, Aug. 1, 1873 (*Dr. E. Coues*; Sm. no. 65239).	Salvin-Godman Coll.
g. ♂ ad. sk.	Big Muddy Creek, July 2, 1883 (*Dr. E. Coues*; Sm. no. 65227).	Salvin-Godman Coll.
h. ♀ ad. sk.	Ralston, Oct. 15, 1873 (*Newberry*; Sm. no. 66972).	U.S. Nat. Mus. [P.].
i. ♀ ad. sk.	Pole Creek, July 29, 1856 (*W. S. Wood*; Sm. no. 5727).	Salvin-Godman Coll.
k. ♂ imm. sk.	Near Fowell, Arizona, Sept. 11, 1874 (*Dr. Rothrock*; Sm. no. 69638).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	San Antonio, Texas, May (*H. E. Dresser*).	Salvin-Godman Coll.
m. [♂ imm.] sk.	California.	Purchased.
n. ♂ ad.; *o*, *p.* ♀ ad. sk.	Mexico.	Sclater Coll.
q. ♂ imm.; *r.* ♀ ad. sk.	Mexico.	Purchased.

62. ZONOTRICHIA.

Type.

Zonotrichia, *Swains. Faun. Bor.-Amer., Birds*, p. 493 (1831) ..... Z. leucophrys.

Range. Throughout Northern, Central, and South America.

Key to the Species.

a. Throat black ..... *querula* ♂, p. 597.
b. Throat not black.
  a'. No chestnut collar round the hind neck; sides of neck not chestnut.
    a''. Crown of head entirely black; throat and breast white, with a large black patch on the lower throat ..... *querula* ♀, p. 597.
    b''. Crown with a broad lateral band of black on each side, the centre of the crown paler.
      a'''. Lores yellow, forming a conspicuous spot.. *albicollis*, p. 598.
      b'''. No yellow on the lores.
        a^4. A large patch of yellow on the fore part of the crown ..... *coronata*, p. 600.
        b^4. No yellow on the forehead, which is white like the centre of the crown.
          a^5. Edge of wing white; axillaries edged with white ..... *leucophrys* ad., [p. 604.
          b^5. Edge of wing yellow; axillaries edged with yellow ..... *gambeli*, p. 606.
    c''. Crown with a chestnut or rufous band along the sides; centre of crown pale.
      c'''. Greater wing-coverts tipped with white, forming a wing-bar.
        c^4. Edge of wing white; axillaries edged with white ..... *leucophrys*, p. 603.
        d^4. Edge of wing yellow; axillaries edged with yellow ..... *gambeli*, p. 606.

d'''. No white tips to the greater wing-coverts.
*e*⁴. Wing-coverts uniform chestnut..... *strigiceps*, p. 607.
*f*⁴. Lesser wing-coverts only chestnut; remainder of coverts like the back ..... *whitii*, p. 608.
d''. Crown without any lateral bands of black or chestnut.
e'''. A patch of yellow on the forehead ..... *coronata* juv., [p. 601.
f'''. No yellow on the forehead, which is olive-brown like the crown; eyebrow ashy grey. *vulcani*, p. 602.
b'. Sides of neck chestnut, extending in a bright collar round the hind neck.
e''. Sides of crown with a broad lateral streak of black ..... *pileata*, p. 610.
f''. No black on the sides of the head, which is entirely grey ..... *canicapilla*, p. 609.

1. Zonotrichia querula.

Fringilla querula, *Nutt. Man.* p. 555 (1840).
Fringilla harrisii, *Audub. B. Amer.* 8vo, vii. p. 331, pl. 484 (1843).
Fringilla comata, *Neuwied, Reis.* ii. p. 352 (1841); *id. J. f. O.* 1858, p. 279.
Zonotrichia querula, *Gambel, Journ. Philad. Acad.* (2) i. p. 51 (1847); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850); *Baird, N. Amer. B.* p. 462 (1858); *Dresser, Ibis*, 1865, p. 488; *Gray, Hand-l. B.* ii. p. 92, no. 7380 (1870); *Allen, Amer. Nat.* 1872, p. 267; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 577, pl. 26. fig. 4 (1874); *Coues, Bull. U.S. Geol. Surv.* iv. p. 594 (1878); *McChesney, op. cit.* v. p. 77 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 24 (1881); *Coues, Check-list N. Amer. B.* p. 57 (1882); *id. Key N. Amer. B.* 2nd ed. p. 384 (1884); *Agersb. Auk*, ii. p. 281 (1885); *A. O. U. Check-list N. Amer. B.* p. 270 (1886); *Seton, Auk*, iii. p. 323 (1886).
Zonotrichia comata, *Bp. Consp.* i. p. 479 (1850).

Adult male. General colour above brown, the scapulars and back broadly streaked with black, and slightly tinged with rufous, and edged with ashy fulvous; lower back and rump dull ashy brown; lesser wing-coverts blackish, edged with ashy; median and greater series black, edged with ashy fulvous, the inner greater coverts externally rufous, both series tipped with white, forming a double wing-bar; bastard-wing and primary-coverts and quills blackish, narrowly edged with ashy, tinged with rufous on the quills, the primaries margined with white; upper tail-coverts and tail-feathers brown, edged with ashy, the three outer ones fringed with white, with which the outermost is also edged; crown of head and nape black; hind neck chocolate-brown, mottled with dusky centres to the feathers; a broad streak of ashy grey along the sides of the hinder crown; lores, feathers round the eye, fore part of cheeks, and entire throat black; ear-coverts ashy; on the hinder part of the cheeks a white patch; remainder of under surface of body white, the sides of the breast brown, clearer on the flanks; the centre of the fore neck mottled with black spots, as also the sides of the breast; the flanks rather broadly striped with dark brown; under tail-coverts

buffy white, with light brown centres; axillaries and under wing-coverts light brown, with whitish margins; quills dusky below, ashy fulvous along the inner web: "bill coral-red; toes dark; tarsi pale" (*Coues*). Total length 6·8 inches, culmen 0·55, wing 3·4, tail 3·4, tarsus 1.

Adult in winter plumage. Rather more rufescent than in summer, the black head obscured by ashy tips to the feathers, not only on the crown, but on the facial markings and on the throat; the sides of the crown and ear-coverts pale sandy rufous, where the summer plumage is ashy grey; the white wing-bars somewhat less pronounced and tinged with fulvous: "bill light reddish brown, usually obscured on ridge and at tip, and paler at base below; feet flesh-coloured, obscured on the toes; iris brown" (*Coues*).

Hab. Interior United States and British Provinces, especially the Valley of the Mississippi, Lower Missouri, and Red River of the north; scarcely as far west as the Rocky Mountains (?); east to Minnesota, Missouri, Iowa, and probably Illinois; south to Texas (*Coues*).

a. ♂ ad. sk.	Souris River, Sept. 18, 1873 (*Dr. E. Coues*; Sm. no. 65794).	Salvin-Godman Coll.
b, *c*. ♂ ad. sk.	49th Parallel, May (*G. Dawson*).	N.A. Boundary Commission [P.].
d. ♂ Ad. hiem. sk.	Texas, Dec. 3, 1880 (*J. D. Ogilby*; Sm. no. 81091).	U.S. Nat. Mus. [P.].
e. Ad. hiem. sk.	San Antonio, Texas, April (*A. L. Heermann*).	Salvin-Godman Coll.
f. ♂ juv. sk.	Gainsville, Cook Co., Texas, Dec. 10 (*W. Brewster*).	Sclater Coll.
g. ♂ ad. sk.	Gainsville, Feb. 17 (*W. Brewster*).	Sclater Coll.
h. ♂ ad. sk.	Gainsville, Nov. 14 (*G. Roysdall*).	R. B. Sharpe, Esq. [P.].

2. Zonotrichia albicollis.

White-throated Sparrow, *Edwards, Gleanings*, ii. p. 198, pl. 304 (1760).

Le Moineau de Pensilvanie, *Briss. Orn.* vi. App. p. 77 (1760).

White-throated Finch, *Lath. Gen. Syn.* ii. pt. i. p. 272 (1783).

Fringilla albicollis, *Gm. Syst. Nat.* i. p. 921 (1788); *Wils. Amer. Orn.* iii. p. 51, pl. xxii. fig. 2 (1811); *Licht. Verz. Doubl.* p. 25 (1823).

Fringilla pennsylvanica, *Lath. Ind. Orn.* i. p. 445 (1790); *Aud. B. Amer.* pl. viii.; *id. Orn. Biogr.* i. p. 42 (1831), v. p. 497 (1839); *id. B. Amer.* 8vo, iii. p. 153, pl. 191 (1841); *Neuwied, J. f. O.* 1858, p. 276; *E. Adams, Ibis*, 1878, p. 425.

Fringilla (Zonotrichia) pennsylvanica, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 256 (1831).

Zonotrichia pennsylvanica, *Jard. ed. Wils. Amer. Orn.* i. p. 340 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838).

Zonotrichia albicollis, *Swains. Classif. B.* ii. p. 288 (1837); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850); *Cab. Mus. Hein.* Th. i. p. 132 (1850); *Baird, B. N. Amer.* p. 463 (1858); *Scl. Cat. Amer. B.* p. 113 (1862); *Blakist. Ibis*, 1862, p. 6, 1863, p. 76;

A. Newt. P. Z. S. 1870, p. 52; *Gray, Hand-l. B.* ii. p. 93, no. 7378 (1870); *R. Gray, B. W. Scotl.* p. 138, cum tab. (1871); *Rowley, P. Z. S.* 1872, p. 681; *Pelz. Ibis*, 1873, p. 29; *Baird, Brewer, & Ridgw. B. N. Amer.* i. p. 574, pl. 26. fig. 10 (1874); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 19 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 127 (1878); *Maynard, B. Florida*, p. 98 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 24 (1881); *Coues, Check-list N. Amer. B.* p. 57 (1882); *Salvin, Cat. Strickl. Coll.* p. 229 (1882); *B. O. U. List Brit. B.* p. 63 (1883); *Stearns, Proc. U.S. Nat. Mus.* vi. p. 117 (1883); *Coues, Key Amer. B.* 2nd ed. p. 382 (1884); *Turner, Proc. U.S. Nat. Mus.* viii. p. 240 (1885); *Merriam, Auk*, ii. p. 65 (1885); *Agersb. t. c.* p. 281; *A. O. U. Check-list N. Amer. B.* p. 271 (1886); *Brewst. Auk*, iii. p. 101 (1886); *Batch. t. c.* p. 314; *Fox, t. c.* p. 318; *Seton, t. c.* p. 324.

Adult male in summer plumage. General colour above chestnut, mottled with black centres to the feathers of the neck and mantle, less distinct on the former but more pronounced on the latter, which has also pale rufous spots on the ends of the outer webs; lower back and rump ashy brown, more distinctly ashy on the latter; upper tail-coverts reddish brown with ashy edges; lesser wing-coverts dull chestnut, obscured by ashy margins; median and greater series blackish, edged with rufous-brown and tipped with white, more distinctly on the median ones, the innermost of both series chestnut, with black centres like the scapulars and back; bastard-wing brown, with olive-brown margins; primary-coverts dusky brown, edged with light brown; quills blackish, the primaries edged with olive-brown, whitish towards the ends, the secondaries more broadly edged with chestnut, like the inner greater coverts; tail-feathers brown, edged with ashy brown, the two centre ones with chestnut; crown with a median band of white, flanked with a broad band of black; lores ashy, surmounted by a spot of bright yellow, succeeded by a broad eyebrow of white along the sides of the crown; feathers below the eye and ear-coverts ashy grey, streaked with white shaft-lines, and separated from the cheeks by a line of black; from behind the eye a line of black, widening out above the hinder ear-coverts, where there is a small whitish spot; cheeks and throat white; lower throat, fore neck, and breast ashy grey, fading off paler towards the abdomen, which is white; sides of upper breast streaked with chestnut; lower flanks brown, slightly streaked with blackish; thighs ashy whitish, washed with olive; under tail-coverts pale fulvescent, with brown centres, and the long ones tipped with white; axillaries and under wing-coverts ashy whitish, washed with olive-yellow, very distinct on the edge of the wing; quills dusky below, ashy along the inner web. Total length 6·4 inches, culmen 0·5, wing 3, tail 2·75, tarsus 0·9.

Adult male in winter plumage. Preserves the characters of the summer plumage, even to the white throat and bright yellow loral spot, as well as the grey on the chest and face, the ear-coverts being merely slightly washed with rufous; the white streak above the ear-coverts is not so pure as in summer, and is slightly tinged with ashy; the black on the sides of the crown is slightly washed with

rufous, and the median coronal streak is ashy in front and creamy buff towards the nape.

Adult female in summer plumage. Differs from the male in having the centre of the crown ashy grey instead of white, with the sides of the crown chestnut instead of black; ear-coverts dull ashy, washed with rufous; the streak above the ear-coverts is ashy or brownish white, instead of being pure white; throat ashy whitish, scarcely contrasting with the chest; yellow loral spot evident, but not so bright as in the male. Total length 6·3 inches, culmen 0·5, wing 2·9, tail 2·75, tarsus 0·85.

Young in autumn plumage. Rather browner than the adults, especially on the crown; the yellow loral spot less pronounced; ear-coverts dark ashy, washed with brown; the ashy of the throat and breast mottled with blackish edges to the feathers, the throat whitish.

Hab. Abundant throughout Eastern America to lat. 65° N., west to Dakota; breeds from the New England and other Northern States northward: winters from the Middle States southward (*Coues*). Accidental in Europe.

a. Ad. st.	North America.	Purchased.
b, *c*. ♂ ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
d. ♂ ad. sk.	Lake of Woods, Manitoba (*G. Dawson*).	N.A. Boundary Commission [P.].
e. Imm. sk.	49th Parallel (*G. Dawson*).	N.A. Boundary Commission [P.].
f. Ad. sk.	Niagara Falls.	J. Gould, Esq. [C.].
g. ♀ ad. sk.	Auburn, New York, April 25 (*F. S. Wright*).	R. B. Sharpe, Esq. [P.].
h. Ad. sk.	Philadelphia (*P. L. S.*).	Sclater Coll.
i, *k*. ♂ ♀ ad. sk.	Washington, D. C. (*C. Drexler*; Sm. nos. 28437, 28444).	Salvin-Godman Coll.
l. ♂ ad. sk.	District of Columbia, April 17 (*P. L. Jouy*; Sm. no. 83527).	U.S. Nat. Mus. [P.].
m, *n*. ♂ ♀ ad. sk.	Mount Carmel, Illinois, Oct. 13 (*R. Ridgway*; Sm. nos. 78485-6).	U.S. Nat. Mus. [P.].
o. Ad. sk.	Jefferson, Ill., Oct. 14 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p. ♂ ad. sk.	Hyde Park, Ill., April 19 (*H. K. Coale*).	U.S. Nat. Mus. [P.].
q. ♀ ad. sk.	Colehour, Ill., May 16 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
r. ♂ ad. sk.	Lake Forest, Ill., April 30 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
s. ♂ ad. sk.	Cook Co., Ill., April 26, 1883 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	St. Clair Co., Ill., May 24, 1883.	R. B. Sharpe, Esq. [P.].
u. ♀ ad. sk.	Whiting Station, Indiana, April 27 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].

3. Zonotrichia coronata.

Black-crowned Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 202, tab. xlv. (1783); *Penn. Arctic Zool.* ii. p. 364 (1785).

Emberiza atricapilla, *Gm. Syst. Nat.* i. p. 875 (1788, pt.); *Audub. B. Amer.* pl. 494; *id. Orn. Biogr.* v. p. 47 (1839).

Emberiza coronata, *Pall. Zoogr. Rosso-Asiat.* ii. p. 44 (1811).

Fringilla aurocapilla, *Nutt. Man.* 2nd ed. p. 555 (1840).

Zonotrichia aurocapilla, *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850); *Newb. Pacif. R. Rep.* iv. p. 88 (1857).

Fringilla atricapilla, *Audub. Syn.* p. 122 (1839); *id. B. Amer.* 8vo, iii. p. 162, pl. 193 (1841).

Zonotrichia atricapilla, *Gray, Gen. B.* ii. p. 373 (1849); *id. Hand-l. B.* ii. p. 93, no. 7377 (1870).

Zonotrichia galapagensis, *Bp. Consp.* i. p. 479 (1850); *Gray, Hand-l. B.* ii. p. 94, no. 7383 (1870); *Salvin, Trans. Z. S.* ix. p. 491, note (1876).

Zonotrichia coronata, *Baird, B. N. Amer.* p. 461 (1858); *Scl. Cat. Amer. B.* p. 113 (1862); *Coues, Ibis*, 1866, p. 268; *Brown, Ibis*, 1868, p. 422; *Dall & Bann. Trans. Chicago Acad.* i. p. 284 (1869); *Cooper, B. Calif.* p. 197 (1870); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 573, pl. xxvi. fig. 1 (1874); *Ridgw. Rep. Surv.* 40*th Par.* p. 472 (1877); *Brewer, Ibis*, 1878, p. 117; *Belding, Proc. U.S. Nat. Mus.* i. p. 416 (1878); *Cooper, op. cit.* ii. p. 247 (1880); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 24 (1881); *Bean, Proc. U.S. Nat. Mus.* v. p. 152 (1882); *Coues, Check-list N. Amer. B.* p. 57 (1882); *Nelson, Cruise R. S. 'Corwin,'* p. 71 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 283 (1884); *Anthony, Auk*, iii. p. 182 (1886); *Everm. t. c.* p. 182; *A. O. U. Check-list N. Amer. B.* p. 271 (1886).

Adult male in summer plumage. General colour above brown, rather rufescent on the neck and mantle, the feathers of the latter having blackish spots near the ends, and a pale whitish shade near the end of the outer web, producing a mottled appearance; lower back and rump uniform ashy brown; upper tail-coverts brown with ashy margins; lesser wing-coverts ashy; median and greater coverts blackish, edged with ashy brown and tipped with white, forming a double wing-bar; bastard-wing and primary-coverts dusky blackish, fringed with ashy; quills dusky blackish, edged with ashy brown, whitish towards the end of the primaries, the inner secondaries externally chestnut like the inner greater coverts; tail-feathers blackish brown, edged with ashy brown; crown with a central patch of bright olive-yellow, the occiput and nape ashy grey, both bordered by a broad band of black from the base of the forehead to the side of the nape; lores, sides of face, ear-coverts, and sides of hinder crown dark ashy grey, slightly mottled with white spots below the edge and on the fore part of the cheeks; chin whitish; cheeks, throat, and chest ashy grey, the latter slightly washed with brown; centre of breast and abdomen whitish, the sides of the body and flanks brown; thighs brown, washed with yellowish white; under tail-coverts ochreous white, with pale brown centres; axillaries and under wing-coverts light brown, edged with pale olive-yellow, especially along the edge of the wing; quills dusky below, ashy along the inner web; "bill reddish brown, dusky towards the point; feet flesh-coloured;

claws dusky" (*Audubon*). Total length 6·5 inches, culmen 0·5, wing 0·1, tail 2·75, tarsus 0·95.

Adult female. Described by Dr. Coues as being like the male.

Adult in winter plumage. Browner than in the summer plumage, the head being brown like the back, and spotted with blackish; the fore part of the crown dull olive-yellow, with a blackish line extending from the base of the bill over the eye; a line of pale ashy along the sides of the crown, tinged with pale olive-yellow in the form of a spot above the eye; throat and breast ashy brownish, whiter towards the chin; sides of body and flanks uniform brown; centre of breast and abdomen white, slightly washed with olive-yellow.

Messrs. Baird, Brewer, and Ridgway speak of the yellow spot above the eye being "reduced to a few feathers in spring dress." Only one of the adult specimens in the British Museum shows slight traces of it.

Hab. Aleutian Islands, and Western America from Alaska to Southern California.

a. Ad. st.	Aleutian Islands.	Mr. Brandt.
b. ♂ ad. sk.	Vancouver's Island.	J. K. Lord, Esq. [P.].
c. Ad. sk.	West side of Rocky Mts., British Columbia.	J. K. Lord, Esq. [P.].
d. Ad. sk.	California (*Bell*).	Sclater Coll.
e. Imm. sk.	California.	Sclater Coll.
f. Imm. sk.	California.	Salvin-Godman Coll.
g. ♂ ad. sk.	Red Bluff, N. California, March 18 (*C. H. Townsend*; Sm. no. 98322).	U.S. Nat. Mus. [P.].
h. ♂ ad. sk.	San Bernardino, California, April 5, 1884 (*R. B. Herron*).	R. B. Sharpe, Esq. [P.].
i, *k*. ♂ ad.; *l*, *m*. ♀ ad. sk.	Mountains near Kernville, California (*H. W. Henshaw*; Sm. nos. 72163–4, 72167–8).	U.S. Nat. Mus. [P.].
n. ♂ ad. sk.	Fort Tejon, California, Oct. 24 (*J. Xantus*; Sm. no. 25675).	Salvin-Godman Coll.

4. Zonotrichia vulcani.

Zonotrichia vulcani, *Boucard, P. Z. S.* 1878, p. 57, pl. 4; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 371, pl. xxvi. fig. 2 (1883).
Junco vulcani, *Ridgw. Proc. U. S. Nat. Mus.* i. p. 225 (1875); *id. op. cit.* v. p. 495 (1883).

Adult male. General colour above dull olive-brown, the mantle and upper back mottled with broad black triangular spots at the ends of the feathers; lower back and rump uniform; scapulars like the back and similarly spotted; lesser wing-coverts ashy olive-brown; median and greater coverts dark brown, edged with olive-brown, slightly rufescent on the latter; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy olive, browner on the secondaries, which have also broader margins; upper tail-coverts brown; tail-feathers dark brown, edged with olive-brown; crown of head and hind neck uniform dull slaty brown, slightly

washed with olive; lores black; a broad eyebrow of lighter slaty grey; ear-coverts ashy brown, slightly washed with olive; cheeks and under surface of body slaty grey, the throat somewhat whiter; centre of breast more ashy and slightly washed with olive; lower abdomen whitish; sides of body and flanks olive-brown; thighs dusky brown, washed with olive; under tail-coverts olive-brown, with dusky bases and white tips to the longer ones; under wing-coverts dusky brown, edged with olive-brown; axillaries ashy, edged with olive; quills below dusky, ashy whitish along the inner edge. Total length 7 inches, culmen 0·55, wing 3·05, tail 2·7, tarsus 1·05.

Hab. Costa Rica.

a. ♂ ad. sk.	Volcan de Irazu, May 1877 (*A. Boucard*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Irazu (*C. Nutting*).	R. B. Sharpe, Esq. [P.].

5. Zonotrichia leucophrys.

Emberiza leucophrys, *Forster, Phil. Trans.* lxii. pp. 382, 426 (1772); *Gm. Syst. Nat.* i. p. 874 (1788); *Wils. Amer. Orn.* iv. p. 49, pl. 31. fig. 4 (1811).

White-crowned Sparrow, *Penn. Arctic Zool.* ii. p. 355 (1785).

Fringilla (Zonotrichia) leucophrys, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 255 (1831).

Fringilla leucophrys, *Audub. B. Amer.* pl. cxiv.; *id. Orn. Biogr.* ii. p. 88 (1834), v. p. 515 (1839); *id. B. Amer.* 8vo, iii. p. 157, pl. cxcii. (1841).

Zonotrichia leucophrys, *Jard. ed. Wils. Amer. Orn.* ii. p. 43 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850); *Baird, B. N. Amer.* p. 458, pl. lxix. fig. 2 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 15 (1858); *Reinh. Ibis*, 1861, p. 7; *Scl. Cat. Amer. B.* p. 112 (1862); *Blakist. Ibis*, 1862, p. 6, 1863, p. 76; *Scl. P. Z. S.* 1864, p. 174; *Baird, Ibis*, 1867, pp. 270, 283; *Dugès, La Nat.* i. p. 148 (1868); *Gray, Hand-l. B.* ii. p. 93, no. 7375 (1870); *Cooper, B. Calif.* p. 196 (1870); *Allen, Bull. Mus. Comp. Zool.* iii. pp. 156, 163, 177 (1872); *Coues, Key N. Amer. B.* p. 145 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 560, pl. 25. figs. 9, 10 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 261 (1875); *Ridgw. Rep. Surv.* 40*th Par.* p. 470 (1877); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 19 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 126 (1878); *Belding, t. c.* p. 415; *Maynard, B. Florida*, p. 516 (1881); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 24 (1881); *Coues, Check-list N. Amer. B.* p. 57 (1882); *Salvin, Cat. Strickl. Coll.* p. 229 (1882); *Ridgw. Proc. U.S. Nat. Mus.* v. p. 531 (1883); *Belding, t. c.* p. 540; *Stearns, op. cit.* vi. p. 117 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 383 (1884); *Turner, Proc. U.S. Nat. Mus.* viii. p. 240 (1885); *Agersb. Auk*, ii. p. 281 (1885); *Merriam, t. c.* p. 65; *Beckh. t. c.* p. 141; *Lawr. t. c.* p. 272; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 369 (1886); *A. O. U. Check-list N. Amer. B.* p. 270 (1886); *Hensh. Auk*, iii. p. 74 (1886); *Seton, t. c.* p. 323.

Zonotrichia gambeli (*nec Nutt.*), *Baird, B. N. Amer.* p. 460 (1858); *Blakist. Ibis*, 1862, p. 76; *Lord, Proc. Roy. Art. Inst.* iv. p. 119

(1864); *Coues, Ibis*, 1865, p. 164; *Dresser, t. c.* pp. 316, 488; *Coues, Proc. Philad. Acad.* 1866, p. 84; *Baird, Ibis*, 1867, p. 270; *Brown, Ibis*, 1868, p. 422; *Dall & Bann. Trans. Chicago Acad.* i. p. 284 (1869); *Allen, Bull. Mus. Comp. Zool.* iii. p. 157 (1872).

Zonotrichia leucophrys, var. gambeli, *Allen, Bull. Mus. Comp. Zool.* iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 145 (1872, pt.); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 569 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874).

Zonotrichia leucophrys, var. intermedia, *Ridgw. Bull. Essex Inst.* v. p. 198 (1873); *Coues, B. N.-West*, p. 156 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 261 (1875).

Zonotrichia intermedia, *Ridgw. Rep. Surv.* 40*th Par.* p. 471 (1877); *Merrill, Proc. U.S. Nat. Mus.* i. p. 126 (1878); *Belding, t. c.* p. 415; *Ridgw. Ibis*, 1883, p. 400; *Batchelder, Auk*, ii. p. 124 (1885); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 370 (1886); *Hensh. Auk*, iii. p. 74 (1886); *Goss, t. c.* p. 114; *Seton, t. c.* p. 323; *A. O. U. Check-list N. Amer. B.* p. 271 (1886).

Zonotrichia leucophrys intermedia, *Coues, Bull. U. S. Geol. Surv.* iv. p. 594 (1878); *Sennett, op. cit.* v. p. 391 (1880); *Coues, Check-list N. Amer. B.* p. 57 (1882); *id. Key N. Amer. B.* 2nd ed. p. 383 (1884).

Zonotrichia gambeli intermedia, *Ridgw. Bull. U. S. Nat. Mus.* no. 21, p. 24 (1881); *Nelson, Cruise R. S.* '*Corwin*,' p. 70 (1883); *Belding, Proc. U.S. Nat. Mus.* v. p. 533 (1883); *Brown, Auk*, i. p. 121 (1884); *Murdoch, Exped. Pt. Barrow*, p. 107 (1885); *Drew, Auk*, ii. p. 16 (1885); *Beckh. t. c.* p. 141.

Adult male in breeding-plumage. General colour above ashy brown, striped with chestnut and grey on the back, the feathers being broadly chestnut in the middle with ashy-grey margins; the hind neck and upper mantle uniform ashy grey; lower back and rump uniform brown; lesser wing-coverts ashy grey; median and greater coverts blackish, edged externally with light brown, and having a white spot at the end of the outer web, less distinct on the greater coverts, the innermost of which are externally rufous: bastard-wing, primary-coverts, and quills dark brown, edged with lighter brown, the primaries margined with ashy whitish towards their ends, the inner secondaries externally rufous like the inner greater coverts, and having a white mark along the end of the outer web; upper tail-coverts and tail-feathers brown, edged with ashy brown, the outer feather rather lighter brown near the tip, which is fringed with whitish; centre of crown with a broad white band reaching to the nape; forehead and a broad band along the sides of the crown black, followed by a distinct supercciliary line of white from the fore part of the eye to the nape, but separated from the ashy-white lores by the black forehead impinging on to the eyelid, which is also whitish; cheeks and ear-coverts ashy grey like the sides of the neck, with a black line above the ear-coverts, widening out on the sides of the neck above the ear-coverts; chin whitish; remainder of under surface of body ashy grey, the flanks browner; centre of abdomen whitish; under tail-coverts pale tawny buff; thighs whitish, dusky behind; axillaries and under wing-coverts pale ashy, with light brown bases; quills dusky brown below, ashy along the inner webs: "bill reddish orange, tipped with brown; feet pale brown; iris

reddish brown" (*Audubon*). Total length 6 inches, culmen 0·45, wing 3·1, tail 2·85, tarsus 0·85.

Young. Black of the head replaced by very rich warm brown, the white of the head by pale brownish; the general ashy colour has a brownish suffusion, and the back is more like that of *Z. albicollis*, being streaked with dusky and ochreous brown (*Coues*).

Very young. Before the first moult, there are indications of the head-markings as above described; but the whole upper parts, sides of the neck, and fore underparts are streaked with blackish and ochreous brown or whitish (*Coues*).

Z. intermedia is said to be similar to *Z. leucophrys*, from which it differs in being smaller and in having a complete superciliary streak of ashy white, the black of the forehead not reaching to the eye so as to separate the white lores from the superciliary streak, as it does in *Z. leucophrys*. Total length 7·8 inches, culmen 0·4, wing 3, tail 2·7, tarsus 0·9.

The specimens in the British Museum are mostly well marked and show the characters of the race distinctly; but Dr. Coues considers that it runs into *Z. leucophrys*, and says that "some specimens resemble *Z. leucophrys* on one side of the head, and *Z. intermedia* on the other." As some of the Museum specimens seem to bear out this statement, I have not separated the two races.

Hab. North America, especially eastern, and rather northerly; west to the Rocky Mountains, where it is united with *Z. intermedia*; north to Greenland, south to Cape S. Lucas. Breeds occasionally in New England, and plentifully in Labrador (*Coues*). Winters in Mexico.

Z. intermedia is said to range from the Rocky Mountains to the Pacific, from Alaska southwards.

a. Ad. sk.	Arctic America.	Sir G. Back [P.].
b. Ad. st.	Repulse Bay.	Dr. Rae [P.].
c. ♂ ad. sk.	Snug Harbour, Labrador, July 9 (*Dr. E. Coues*; Sm. no. 18112).	Salvin-Godman Coll.
d. ♀ ad. sk.	S. Michael's, Alaska, June 4, 1877 (*L. M. Turner*; Sm. no. 73332).	U.S. Nat. Mus. [P.].
e. ♂ ad. sk.	Nushagak, Alaska (*C. W. McKay*; Sm. no. 86534).	U.S. Nat. Mus. [P.].
f. ♀ ad. sk.	Fort Anderson, June 18, 1864 (*R. McFarlane*; Sm. no. 43364).	Salvin-Godman Coll.
g, *h*, *i.* Ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
k. Ad. sk.	49th Parallel, June 26, 1874 (*G. Dawson*).	N. Amer. Boundary Commision.
l, *m.* ♂ ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
n. ♂ juv. sk.	British Columbia.	J. K. Lord, Esq. [C.].
o. ♂ ad.; *p.* ♀ juv. sk.	Jasper Co., Illinois, Dec. 20, 1883 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
q. ♂ ad. sk.	Wheatland, Indiana, May 5, 1883 (*R. Ridgway*; Sm. no. 90299).	Salvin-Godman Coll.

r. ♂ ad. sk.	Fort Bridger, Utah, June 3, 1858 (*C. Drexler*; Sm. no. 11149).	R. B. Sharpe, Esq. [P.].
s. Ad. sk.	Ohio (*G. L. Lawrence*).	Sclater Coll.
t. ♂ ad. sk.	Camp no. 18, 40th Parallel, Sept. 11, 1867 (*R. Ridgway*; Sm. no. 53494).	R. B. Sharpe, Esq. [P.].
u. ♂ ad. sk.	West Humboldt Mountains, Sept. 20, 1867 (*R. Ridgway*; Sm. no. 53496).	Salvin-Godman Coll.
v. ♀ ad. sk.	Tuczon, Arizona, Jan. 22, 1884 (*E. W. Nelson*; Sm. no. 98869).	U.S. Nat. Mus. [P.].
w. ♂ ad. sk.	Tuczon, May 1, 1884 (*E. W. Nelson*; Sm. no. 98865).	U.S. Nat. Mus. [P.].
x. ♂ ad. sk.	Tuczon, April 22, 1884 (*F. Stephens*; Sm. no. 10685).	R. B. Sharpe, Esq. [P.].
y. ♀ ad. sk.	Bowie, Arizona, Oct. 10, 1873 (*Newberry*; Sm. no. 66882).	U.S. Nat. Mus. [P.].
z. ♀ ad. sk.	Banning, California, April 22, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
a'. ♂ ad. sk.	Near Kernville, California, Oct. 20, 1875 (*H. W. Henshaw*; Sm. no. 72149).	Salvin-Godman Coll.
b', c'. ♂ ad. et juv. sk.	Kernville, Oct. (*H. W. H.*; Sm. nos. 79596, 72153).	U.S. Nat. Mus. [P.].
d'. ♂ ad. sk.	La Paz, Lower California, Jan. 6 (*A. Forrer*).	Salvin-Godman Coll.
e'. Ad. sk.	Fort Tejon, Lower California, Nov. 17, 1860 (*J. Xantus*).	Sclater Coll.
f'. ♂ ad. sk.	Fort Tejon, Sept. 20 (*J. Xantus*; Sm. no. 25697).	Salvin-Godman Coll.
g'. ♀ ad. sk.	Fort Tejon, Dec. 9 (*J. Xantus*; Sm. no. 25684).	Salvin-Godman Coll.
h'. ♂ ad. sk.	Fort Tejon, Dec. 14 (*J. X.*; Sm. no. 25701).	R. B. Sharpe, Esq. [P.].
i'. ♀ ad. sk.	San Nicholas, Oct. 1859 (*J. Xantus*; Sm. no. 26566).	R. B. Sharpe, Esq. [P.].
k'. Ad. sk.	Mexico (*J. Taylor*).	Zool. Society.
l'. Ad. sk.	Mexico (*White*).	Sclater Coll.
m'. Ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.

Subsp. *a.* **Zonotrichia gambeli.**

Fringilla gambeli, *Nutt. Man. Orn.* i. p. 556 (1840); *Gambel, Proc. Philad. Acad.* 1842, p. 262.

Zonotrichia gambeli, *Gambel, Journ. Philad. Acad.* 2nd series, 1848, p. 50; *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850); *Gray, Hand-l. B.* ii. p. 93, no. 7396 (1870); *Cooper, B. Calif.* p. 195 (1870); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 24 (1881); *Coues, Check-list N. Amer. B.* p. 57 (1882); *Ridgw. Ibis*, 1883, p. 400; *Salvin, P. Z. S.* 1883, p. 422; *Coues, Key N. Amer. B.* 2nd ed. p. 383 (1886); *Anthony, Auk*, iii. p. 168 (1886); *Everm. t. c.* p. 182; *A. O. U. Check-list N. Amer. B.* p. 171 (1886).

Zonotrichia leucophrys, var. gambeli, *Cooper, Proc. U.S. Nat. Mus.* i. p. 247 (1878).

Adult male. General colour above Sparrow-like, brown, with

blackish centres to the feathers of the mantle, which have somewhat paler edgings, but no grey; the hind neck brown, streaked with dusky; the scapulars tinged with chestnut; lesser wing-coverts brown; median and greater coverts blackish, edged externally with pale brown, and tipped with white at the end of the outer web, the inner coverts of both series externally washed with chestnut; bastard-wing and primary-coverts dusky, edged with lighter brown, whitish at the end of the outer web; quills dusky brown, externally edged with olive-brown, rufescent towards the base; the primaries edged with whitish, the inner secondaries with chestnut, and, like the inner coverts, whitish at the ends; lower back and rump uniform brown; upper tail-coverts brown, slightly tinged with rufous, with dark centres to the feathers; tail-feathers brown, edged with olive-brown; crown of head white, bordered on each side by a line of black, very broad, and reaching from the base of the nostrils to the sides of the nape; lores and a narrow line over the eye whitish; ear-coverts ashy grey, with a black line above the upper margin; cheeks, throat, fore neck, and chest ashy grey; lower breast and abdomen whitish, slightly tinged with olive-yellow; sides of body and flanks uniform brown, paler on the latter; thighs olive-yellow, posteriorly brown; under tail-coverts dull white; under wing-coverts and axillaries pale olive-yellow, with light brown bases, the edge of the wing pale olive-yellow; quills dusky below, ashy along the edge of the inner web. Total length 6·5 inches, culmen 0·5, wing 2·95, tail 2·7, tarsus 0·9.

The *winter plumage* is brown and generally Sparrow-like in character as in summer, but the median line of the crown is pale brown, with a broad chestnut band on each side of the head; the eyebrow, ear-coverts, and sides of neck are brown; lores and eyelid dull whitish, as well as the fore part of the cheeks; throat ashy whitish, the latter skirted by a malar line of dark brown spots; lower throat and fore neck ashy brown; the lower breast and abdomen white, washed with olive-yellow; sides of body and flanks brown, the latter mottled with darker centres; under tail-coverts also brown, with darker centres; axillaries and under tail-coverts pale olive-yellow, as in the full plumage.

The differences between this race and the one called *Z. intermedia* are extremely slight, and the two will probably be found to grade into one another. Certainly several specimens named *Z. intermedia* by Mr. Ridgway himself have a good deal of yellow on the edge of the wing.

Hab. Pacific coast of North America to California.

a. ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
b. Ad. sk.	Esquimault (*A. H. Markham*).	Salvin-Godman Coll.
c. Ad. sk.	British Columbia.	Dr. Lyall [P.].
d. Ad. sk.	S. Juan Straits.	Capt. Kellett & Lieut. Wood [P.].
e. Ad. sk.	S. Juan Island.	Dr. Lyall [P.].
f. Ad. sk.	Saturna Island.	Dr. Lyall [P.].
g. Ad. sk.	Vancouver Island.	J. K. Lord, Esq. [C.].
h, *i*. Imm. sk.	California.	Sclater Coll.

k. Imm. sk.	California.	Salvin-Godman Coll.
l. Ad. sk.	Hayward's, California, May 19, 1881 (*E. W. Emerson*).	R. B. Sharpe, Esq. [P.].

6. Zonotrichia strigiceps.

Zonotrichia strigiceps, *Gould, Voy.* '*Beagle*,' *Birds*, p. 92 (1841); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 479 (1850); *Gray, Hand-l. B.* ii. p. 94, no. 7382 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Scl. Ibis*, 1877, p. 47, pl. 1. fig. 2; *Salv. Cat. Strickl. Coll.* p. 230 (1882).

Adult (type of species). General colour above dark rufous-brown, with fulvous or whitish edges to the feathers of the mantle and back, which have broad black centres; the lower back, rump, and upper tail-coverts streaked with black centres to the feathers, the upper tail-coverts slightly tinged with chestnut; scapulars ferruginous, streaked with broad black centres; wing-coverts chestnut, with dusky centres to the median ones, the greater series tipped indistinctly with sandy buff, and having a large black median streak; bastard-wing brown, margined with white; primary-coverts and quills blackish, edged with chestnut, the primaries with light brown, the inner secondaries margined with sandy buff; tail-feathers brown with rufous-brown margins; head chestnut, streaked with black, with a median band of ashy olive on the hinder crown and nape, very indistinct; eyebrow ashy olive, yellowish above the lores; hind neck dark ashy grey, streaked with black, forming a broad but indistinct collar; ear-coverts pale rufous-brown; feathers below the eye dull whitish; a narrow cheek-stripe of dull whitish, separated from the throat by a line of dusky blackish; throat ashy whitish; chest pale fulvous brown, ashy on the sides of the breast, which have narrow blackish stripes; abdomen white; sides of body uniform sandy buff; under tail-coverts pale sandy buff, with small black centres; axillaries and under wing-coverts dull white, with pale brown bases; quills dusky below, light ashy rufous along the edge of the inner web. Total length 5·7 inches, culmen 0·45, wing 2·35, tail 2·25, tarsus 0·8.

Hab. Southern Brazil.

a. Ad. sk.	Santa Fé, Buenos Ayres (*C. Darwin*).	Sclater Coll.	(Type of species*.)

7. Zonotrichia whitii†. (Plate XIII.)

Zonotrichia strigiceps, *White, P. Z. S.* 1883, p. 38 (*nec Gould*).

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* This specimen was given by Mr. Gould to Dr. Sclater in 1870. It had doubtless been overlooked by him after he described the 'Beagle' collection in 1841, and became incorporated by mistake in his own private series.

† Dr. Sclater is probably right in suggesting to me that this species should be placed in the genus *Hæmophila*; but it is evidently a connecting link between the latter genus and *Zonotrichia*.

Adult male. General colour above light brown and Sparrow-like, with fulvescent margins and black centres to the feathers of the back and mantle, the lower back, rump, and upper tail-coverts distinctly centred with black, but not so broadly as on the mantle; lesser wing-coverts chestnut; median and greater coverts blackish, edged externally with pale sandy buff; bastard-wing blackish, edged with white; primary-coverts and quills dusky blackish, edged with pale brown, more ashy towards the end of the primaries, the inner secondaries more rufescent externally, like the innermost greater coverts; tail-feathers dark brown, edged with pale brown, the outer ones also fringed with ashy fulvous round the end of the inner web; centre of crown and nape ashy grey, streaked with black, and bordered on each side with a broad band of dark chestnut, also streaked with black; a distinct grey eyebrow, becoming white over the lores; the latter as well as the sides of the face and the ear-coverts dark ashy grey, narrowly streaked with white shaft-lines; above the ear-coverts a streak of chestnut; cheeks white, with a narrow line of black above and below; hinder cheeks ashy grey; throat white; lower throat, fore neck, and breast pale ashy grey; abdomen white; flanks and sides of body brown; thighs pale sandy buff, as well as the under tail-coverts; axillaries and under wing-coverts pale sandy buff with a tinge of olive-yellow; quills dusky below, ashy rufous along the inner web: "iris reddish brown" (*White*). Total length 6 inches, culmen 0·55, wing 2·55, tail 2·8, tarsus 0·75.

Hab. Argentine Republic.

a. ♂ ad. sk. Cosquin, Cordova, Argentine Republic, June 17 (*E. W. White*). Sclater Coll.

8. Zonotrichia canicapilla.

? Rusty-collared Finch, *Lath. Gen. Syn. Suppl.* p. 170 (1787).
? Fringilla australis, *Lath. Ind. Orn.* p. 466 (1790).
Zonotrichia canicapilla, *Gould, Voy. 'Beagle,' Birds*, p. 91 (1841); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 479 (1850); *Durnf. Ibis*, 1877, p. 33; *Scl. t. c.* p. 47, pl. 1. fig. 2; *Scl. & Salv. Ibis*, 1878, p. 432; *Durnf. t. c.* p. 393; *Sharpe, P. Z. S.* 1881, p. 7.
Zonotrichia pileata (*nec Bodd.*), *Scl. & Salv. Ibis*, 1870, p. 499.
Zonotrichia australis, *Gray, Hand-l. B.* ii. p. 94, no. 7381 (1870).

Adult. General colour above brown, the upper back and mantle as well as the scapulars mesially streaked with broad black centres; the upper mantle more uniform, and separated from the head by a collar of chestnut; lower back and rump uniform ashy brown; lesser wing-coverts ashy grey; median and greater coverts black, externally reddish brown, more chestnut on the inner greater coverts, which resemble the inner secondaries; both median and greater coverts tipped with white, the former more distinctly; bastard-wing dusky blackish, edged with white; primary-coverts and quills dusky blackish, edged with rufous-brown, the primaries with ashy

whitish; upper tail-coverts and tail-feathers blackish brown, edged with ashy brown, the former broadly, the latter narrowly, the outer feathers fringed with whitish; crown of head uniform ashy grey, more hoary over the eye and towards the lores and base of forehead; lores, feathers below the eye, and ear-coverts blackish; a shade of ashy grey across the latter, with whitish shaft-lines; the ear-coverts distinctly black along the upper margin, extending in a line on to the sides of the neck, which are chestnut, this colour descending on to the sides of the breast; cheeks and throat white, with dusky bases to the fore part of the chin and cheeks; below the hinder ear-coverts a large white patch; fore neck with a black patch, somewhat broken up in the centre; breast ashy; abdomen white with a slight tinge of olive-yellow; sides of breast and flanks brown, slightly rufescent on the former; thighs dull ashy, with whitish tips; under tail-coverts yellowish white, with dusky centres; axillaries pale brown, tinged with olive-yellow; under wing-coverts whitish, with dusky bases; quills dusky, ashy along the edge of the inner web. Total length 6 inches, culmen 0·5, wing 3·4, tail 4·7, tarsus 0·9.

Young. Resembles that of *Z. pileata*, but is larger. Wing 3·1 inches.

Hab. Patagonia.

a. Ad. sk.	South America.	J. Gould, Esq.
b. Ad. sk.	Tierra del Fuego (*C. Darwin*).	Zoological Society. (Type of species.)
c. Juv. sk.	Port Desire, Patagonia, Jan. 4, 1837 (*C. Darwin*).	Salvin-Godman Coll.
d. Ad. sk.	Straits of Magellan.	Capt. King [P.].
e. ♂ ad. sk.	Sandy Point, Straits of Magellan, March (*Dr. Cunningham*).	Salvin-Godman Coll.
f, g. ♀ juv. sk.	Sandy Point.	Voy. H.M.S. 'Challenger.'
h. Ad. sk.	Puerto Bueno, Nov. (*Dr. Coppinger*).	Voy. H.M.S. 'Alert.'
i, k, l, m. Ad. sk.	S. Martin's Cave, Hermit Island.	Antarctic Expedition.
n. ♂ ad. sk.	Chuput, Patagonia, Oct. 31.	H. Durnford, Esq. [P.].
o. ♀ ad. sk.	Chuput, Sept. 25.	H. Durnford, Esq. [P.].

9. Zonotrichia pileata.

Bruant du Cap de Bonne Espérance, *Daubent. Pl. Enl.* iv. pl. 386. fig. 2.

Fringilla capensis, *P. L. S. Müller, Syst. Nat. Suppl.* p. 165 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 255.

Emberiza pileata, *Bodd. Tabl. Pl. Enl.* p. 23 (1783).

Chingolo, *Azara, Apunt.* i. p. 492 (1802).

Fringilla matutina, *Licht. Verz. Doubl.* p. 25 (1823).

Tanagra ruficollis, *Spix, Av. Bras.* ii. p. 39, pl. 53. fig. 3 (1824).

Fringilla chilensis, *Meyen, Reis.* iii. p. 212 (1834).

Zonotrichia subtorquata, *Swains. Classif. B.* ii. p. 288 (1837).

Pyrgita peruviana, *Less. Rev. Zool.* 1839, p. 45.

Zonotrichia matutina, *Gould, Voy. 'Beagle,'* p. 91 (1841); *Hartl. Ind. Azara,* p. 9 (1847); *Gray, Gen. B.* ii. p. 373 (1849); *Bp.*

Consp. i. p. 479 (1850); *Cab. Mus. Hein.* Th. i. p. 132 (1850); *Tschudi & Cab. Faun. Peruan.* p. 32 (1855).

Zonotrichia pileata, *Scl. P. Z. S.* 1858, pp. 454, 552, 1859, p. 140; *id. & Salv. Ibis*, 1859, p. 18; *Scl. P. Z. S.* 1860, p. 76; *Cab. J. f. O.* 1860, p. 411; *Scl. Cat. Amer. B.* p. 113 (1862); *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868); *Frantz. J. f. O.* 1869, p. 301; *Gray, Hand-l. B.* ii. p. 93, no. 7389 (1870); *Salv. P. Z. S.* 1870, p. 190; *Hudson, t. c.* p. 549; *Pelz. Orn. Bras.* p. 229 (1871); *Wyatt, Ibis*, 1871, pp. 127, 328; *Hamilton, t. c.* p. 303; *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Tacz. P. Z. S.* 1874, p. 52; *Durnf. Ibis*, 1876, p. 158, 1877, p. 172; *Boucard, P. Z. S.* 1878, p. 57; *Tacz. P. Z. S.* 1879, p. 230; *Scl. & Salv. P. Z. S.* 1879, pp. 507, 606; *Salvin & Godm. Ibis*, 1879, p. 200; *Gibson, Ibis*, 1880, p. 28; *Salvin & Godm. t. c.* p. 122; *Salv. t. c.* p. 355; *Durnf. t. c.* p. 416; *Tacz. P. Z. S.* 1880, p. 199; *Forbes, Ibis*, 1881, p. 337; *Salvin, Cat. Strickl. Coll.* p. 230 (1882); *White, P. Z. S.* 1882, p. 600; *Salvin, P. Z. S.* 1883, p. 432; *Ridgw. Proc. U. S. Nat. Mus.* v. pp. 494, 500 (1883); *Berlepsch & Ihering in Madarász's Zeitschr. ges. Orn.* ii. p. 124 (1885); *Salvin, Ibis*, 1885, p. 216; *id. & Godman, Biol. Centr.-Amer., Aves*, i. p. 370 (1886); *Tacz. Orn. Pérou*, ii. p. 45 (1886).

Adult male. General colour above brown, streaked rather broadly with black; lower back, rump, and upper tail-coverts uniform ashy brown; lesser wing-coverts dull ashy grey, with dusky bases; median and greater coverts blackish brown, edged with ashy brown, and narrowly tipped with white; bastard-wing, primary-coverts, and quills dark brown, edged with paler ashy brown, slightly more rufescent on the secondaries, especially the inner ones, the primaries narrowly margined with ashy whitish; upper tail-coverts and tail-feathers brown, edged with ashy brown, whitish on the outer ones; crown of head slaty grey, with a broad line of black from the base of the forehead to the sides of the nape, followed by a very distinct white eyebrow; sides of neck bright chestnut, a shade of which encircles the head, separating the latter from the neck; feathers round eye and ear-coverts black, mottled with a few white dots below the eye, the ear-coverts with a transverse band of ashy; cheeks, throat, and under surface of body white, shaded with ashy on the breast, the flanks more distinctly brown; a black patch on each side of the fore neck, followed by a large patch of bright chestnut like the sides of the neck; thighs and under tail-coverts ashy whitish, the latter pale brown in the centre; axillaries brown, slightly washed with olive-yellow; under wing-coverts dark brown, with whitish edges; quills dusky below, ashy along the inner webs: "bill brown in December, or yellowish, with the upper mandible browner in September; feet brownish flesh-colour; iris dark brown" (*Jelski*). Total length 5·5 inches, culmen 0·5, wing 2·6, tail 2·2, tarsus 0·8.

Adult female. Similar in plumage to the male. Total length 5·7 inches, culmen 0·45, wing 2·7, tail 2·5, tarsus 0·8.

Young. Spotted like the young of an *Accentor*, which it strongly resembles in appearance. General colour fulvous-brown, the feathers centred with black; the lower back and rump spotted, but less

distinctly; the head also brown like the back, and spotted with black, the centre of the crown rather paler; a whitish eyebrow above the ear-coverts; lores and ear-coverts dusky blackish; sides of neck pale and more sandy than the back, and foreshadowing the rufous neck of the adults; cheeks and under surface of body ashy white, spotted with small triangular markings of blackish, the chest and sides of the body fulvescent; abdomen purer white; wings and tail much as in the adult, but the coverts tipped with fulvous instead of white.

Some young birds, probably males, have the spots on the under surface blacker and more linear, with a distinct shade of chestnut on the sides of the breast and neck; the centre of the crown distinctly ashy, as well as the streak above the ear-coverts; the quills distinctly edged with rufous.

It is interesting to trace the variation in the colour of this species. Beginning with Chilian and La-Plata examples, a gradual transition is met with towards the Guatemalan specimens, which are much darker slaty grey on the head, have a nearly perfect præpectoral black collar, and are smaller in size. In northern specimens the black patches on the side of the neck are connected by a few tiny dots of black; in Bolivian examples the connection is slightly more marked, still more so in Guiana and Colombian ones, and reaching its most complete development in those from Costa Rica and Guatemala.

Hab. The whole of Central America from Mexico to Panama, and throughout South America to Southern Brazil, Bolivia, and Chili.

a. Var. sk.	South America.	Purchased.
b. Ad. sk.	South America.	Sclater Coll.
c, d. Ad. sk.	Coquimbo, Chili, Nov. (*A. H. Markham*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Chili.	Salvin-Godman Coll.
f. ♂ ad. st.	Monte Video.	Sir W. Burnett and Admiral Fitzroy [P.].
g. Ad. sk.	Near Monte Video, May 1, 1875.	H. Durnford, Esq. [C.].
h, i. ♂ ♀ ad. sk.	Buenos Ayres, Oct. 29, 1876.	H. Durnford, Esq. [C.].
k. ♀ ad. sk.	Punta Lara, Buenos Ayres, Dec. 19, 1875.	H. Durnford, Esq. [C.].
l. Ad. sk.	Buenos Ayres.	Alan Peel, Esq. [C.].
m. ♂ ad. sk.	Conchitas, Buenos Ayres, Nov. (*W. H. Hudson*; Sm. no. 49380).	Salvin-Godman Coll.
n, o. Ad. sk.	Salta, Argentine Republic, June 22, 1878.	H. Durnford, Esq. [P.].
p. Ad. sk.	Brazil.	Capt. Lord Byron [P.].
q. Ad. sk.	Brazil.	J. Gould, Esq.
r. Ad. st.	Brazil.	Lord Stuart de Rothesay.
s, t. ♂ ♀ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
u. Juv. sk.	Nairapi, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

v. Ad. sk.	Sorata, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
w. Ad. sk.	Bolivia (*D. Forbes*).	Sclater Coll.
x. Jun. sk.	Arequipa (*H. Whitely*).	Sclater Coll.
y. Ad. sk.	Cuenca, Ecuador (*L. Fraser*).	Sclater Coll.
z. Ad. sk.	Bogotá, U.S. Colombia (*G. Crowther*).	Salvin-Godman Coll.
a'. Ad. sk.	Bogotá.	Sclater Coll.
b'. Ad. sk.	Bogotá.	Purchased.
c'. ♀ ad. sk.	Medellin, U.S.C. (*T. K. Salmon*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	San Sebastian, U.S.C., July 29 (*F. Simons*).	Salvin-Godman Coll.
e'. Ad. sk.	Atanques, Sierra Nevada of Santa Marta, U.S.C., Feb. 26 (*F. Simons*).	Salvin-Godman Coll.
f'. ♂ juv. sk.	Sierra Nevada of Santa Marta (*F. Simons*).	Sclater Coll.
g', h'. ♂ ♀ ad.; *i'.* ♂ juv. sk.	Merumè Mountains, British Guiana, June (*H. Whitely*).	Salvin-Godman Coll.
k'. ♂ ad. sk.	Roraima, Dec. 1 (*H. Whitely*).	Salvin-Godman Coll.
l'. ♂ ad.; *m'.* Juv. sk.	Chitra, Panama (*E. Arcé*).	Salvin-Godman Coll.
n'. ♂ ad. sk.	Castillo, Veragua (*E. Arcé*).	Salvin-Godman Coll.
o'. ♂ ad. sk.	Southern slope of Volcan de Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
p'. Ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
q'. Ad. sk.	San José, Costa Rica, Feb. 2 (*J. Carmiol*; Sm. no. 42890).	Salvin-Godman Coll.
r'. Ad. sk.	Dueñas, Guatemala, March 7 (*O. S.*).	Salvin-Godman Coll.
s'. Juv. sk.	Dueñas (*O. S. & F. D. G.*).	Salvin-Godman Coll.
t'. ♀ ad. sk.	Quezaltenango, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
u'. Ad. sk.	Mexico.	J. Gould, Esq.

63. CYANOSPIZA.

Type.

Passerina, *Vieillot, Analyse*, p. 30 (1816, *nec L.*).
Spiza, *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838) . . C. amœna.
Cyanospiza, *Baird, B. N. Amer.* p. 500 (1858) . . . . . C. ciris.

Range. North America, extending throughout Central America to Panama; Cuba; Bahamas; islands off the coast of Yucatan.

Key to the Species.

a. Tail-feathers edged with red; lower back and rump red, mottled with lilac; mantle green; head blue; under surface red . . . . *ciris* ♂ ad., p. 615.
b. No red on the tail-feathers, which are edged with blue or green or brown.
a'. Head blue like the back, or only a little deeper coloured.
a''. Entire under surface blue . . . . . *cyanea* ♂ ad., p. 618.

b''. Throat blue; fore neck orange-rufous; breast and abdomen white ..... *amœna* ♂ ad., p. 620.
c''. Throat blue; breast and abdomen red, the former overshaded with blue .... *rositæ* ♂ ad., p. 621.
b'. Crown green; hind neck and back blue; below beautiful orange..... *leclancheri* ♂ ad., p. 623.
c'. Crown green, almost like the back.
d''. Tail edged with blue; upper tail-coverts blue ..... *leclancheri* ♀ ad., p. 623.
e''. Tail edged with green; upper tail-coverts green..... *ciris* ♀ ad., p. 615.
d'. Forehead purplish blue; crown and hind neck red; back reddish; lower back and rump purplish blue; throat and chest reddish..... *versicolor* ♂, p. 624.
e'. Head brown.
f''. Lower back and rump blue..... *rositæ* ♀, p. 622.
g''. Lower back and rump olive-ashy; outer aspect of quills dull bluish ashy .... *amœna* ♀, p. 621.
h''. Lower back and rump brown like the mantle; outer aspect of quills ashy grey.
a'''. Median and greater wing-coverts edged with buffy white; breast streaked with dusky ..... *cyanea* ♀ ad., p. 618.
b'''. Wing-coverts brown at the ends; breast uniform brown..... *versicolor* ♀ ad., p. 624.

1. Cyanospiza ciris.

The Painted Finch, *Catesby, N. H. Carol.* i. p. 44, pl. 44 (1731); *Edwards, N. H. Birds*, vi. p. 132, pl. 273 (1760).
Le Verdier de la Louisiane dit vulgairement le Pape, *Briss. Orn.* iii. p. 200, pl. viii. fig. 3 (1760); *Daubent. Pl. Enl.* iv. pl. 159.
Emberiza ciris, *Linn. Syst. Nat.* i. p. 313 (1766); *Wilson, Amer. Orn.* iii. p. 68, pl. xxiv. figs. 1, 2 (1811); *Hahn & Küster, Vög. aus Asien &c.* Lief. x. Taf. 5 (1850).
Fringilla mariposa, *Scop. Ann.* i. p. 151 (1769).
Le Pape, *Montb. Hist. Nat. Ois.* iv. p. 177 (1778).
Painted Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 206 (1783).
Passerina ciris, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 17 (1817); *id. Gal. Ois.* i. p. 81, pl. lxvi. (1825); *Gray, Hand-l. B.* ii. p. 97, no. 7437 (1870); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 27 (1881); *Coues, Check-list*, p. 59 (1882); *id. Key N. Amer. B.* 2nd ed. p. 391 (1884); *A. O. U. Check-list N. Amer. B.* p. 288 (1886).
Fringilla ciris, *Audub. B. Amer.* pl. liii.; *id. Orn. Biogr.* i. p. 279 (1832), v. p. 517 (1839); *Lembeye, Av. Cuba*, p. 130 (1850).
Spiza ciris, *Jard. ed. Wils. Amer. Orn.* i. p. 358 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Audub. B. Amer.* iii. p. 93, pl. 169 (1841); *Gray, Gen. B.* ii. p. 375 (1849); *Bp. Consp.* i. p. 474 (1850); *Cab. Mus. Hein.* Th. i. p. 148 (1850); *id. J. f. O.* 1856, p. 8; *Scl. P. Z. S.* 1856, p. 304, 1858, p. 358; *Moore, P. Z. S.* 1859, p. 58; *Taylor, Ibis*, 1860, p. 111.
Cyanospiza ciris, *Baird, B. N. Amer.* p. 503 (1858); *id. Rep. Mex. Bound. Surv.* ii. p. 17, pl. 18. fig. 2 (1858); *Scl. P. Z. S.* 1859, p. 379; *Scl. & Salv. Ibis*, 1859, p. 17; *Scl. Cat. Amer. B.* p. 107 (1862); *Lawr. Ann. Lyc. N. Y.* viii. p. 176 (1865); *Dresser, Ibis*,

1865, p. 491; *Scl. P. Z. S.* 1867, p. 142; *Baird, Ibis*, 1867, p. 276; *Lawr. Ann. Lyc. N. Y.* ix. pp. 103 (1868), 201 (1869); *Dugès, La Nat.* i. p. 140 (1869); *Frantz. J. f. O.* 1869, p. 301; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Salv. P. Z. S.* 1870, p. 190; *Scl. & Salv. t. c.* p. 836; *Coues, Key N. Amer. B.* p. 149 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 87 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 276 (1874); *id. Bull. U.S. Nat. Mus.* no. 4, p. 20 (1874); *Hensh. Rep. Zool. Spec.* p. 301 (1875); *Gundl. Orn. Cuba*, p. 93 (1876); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 20 (1878), v. p. 392 (1879); *Merrill, Pr. U.S. Nat. Mus.* i. p. 129 (1878); *Boucard, P. Z. S.* 1878, p. 57, 1883, p. 444; *Cory, B. Bahamas*, p. 89 (1880); *Nutting & Ridgw. Proc. U.S. Nat. Mus.* vi. pp. 383, 392 (1884); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 365 (1886).

Adult male. Back and scapulars golden yellow with a greenish tinge and here and there a slight wash of reddish; lower back, rump, and upper tail-coverts dull vermilion, glossed with lilac; lesser wing-coverts dull purplish blue; median coverts dull vermilion with a purplish shade; greater series green; bastard-wing and primary-coverts dusky purplish, the latter washed with red; quills dusky, externally dull reddish, some of the secondaries edged with green; tail-feathers dusky, externally dull red; entire crown and hind neck, sides of face, sides of neck, cheeks, and ear-coverts glossy purplish blue; lores dusky; round the eye a ring of vermilion; entire under surface of body bright vermilion, fading slightly on the abdomen and under tail-coverts; sides of fore neck and lower throat washed with lilac-blue; axillaries dull reddish; under wing-coverts ashy washed with purplish; quills dusky below, ashy along the edge of the inner web: "bill dark brown above, light blue beneath; feet light blue; iris hazel" (*Audubon*). Total length 5 inches, culmen 0·45, wing 2·9, tail 2·15, tarsus 0·75.

Adult female. Different from the male, and much duller in colour. Entirely green above with a slight olive-golden gloss; wing-coverts like the back; bastard-wing, primary-coverts, and quills dusky, externally green like the back, a little more ashy on the primaries; centre tail-feathers dull green, the remainder dusky, externally dull green; crown of head like the back; lores ashy; feathers round the eye yellowish buff; sides of face and ear-coverts greenish washed with dull red; under surface of body pale reddish, mixed with yellowish green; sides of body, and flanks and thighs olive-brown tinged with reddish: under tail-coverts olive-yellowish; axillaries like the sides of the breast; under wing-coverts ashy washed with greenish; quills dusky below, ashy along the inner web. Total length 5·3 inches, culmen 0·5, wing 2·9, tail 2·2, tarsus 0·75.

Young. Brown above, with only a faint tinge of olive-green on the quills, upper tail-coverts, and tail-feathers; wing-coverts and bastard-wing-feathers and inner secondaries edged with sandy brown at the ends; ear-coverts brown; lores, feathers round the eye, and under surface of body dull whitish, washed with sandy buff; the sides of the body browner.

After the first moult both sexes resemble the old female in winter plumage, but have no reddish tinge underneath. The young males appear to be rather brighter yellowish buff below, with a distinct golden gloss on the green upper surface; they gradually acquire the red and blue, "with every possible gradation between the colours of the two sexes" (*Coues*).

Hab. Abundant in the southern United States, extending as far north as Carolina along the coast (*Coues*); Texas; Central America from Mexico to Guatemala and Panama; Cuba; Bahamas; Cozumel and neighbouring islands.

a. ♂ ad. sk.	San Elizario, Texas, May (Sm. no. 6276).	Salvin-Godman Coll.
b. ♀ ad. sk.	Edinburgh, Texas, May 13 (*Dr. J. C. Merrill*; Sm. no. 73029).	Salvin-Godman Coll.
c. ♀ juv. sk.	Laredo, Rio Grande River, Texas, Aug. 12 (*Dr. H. B. Butcher*; Sm. no. 45316).	U.S. Nat. Mus. [P.].
d. ♀ juv. sk.	Laredo, July 12 (*Dr. H. B. Butcher*; Sm. no. 45317).	U.S. Nat. Mus. [P.].
e. ♂ ad. sk.	Laredo, April 29 (*Dr. H. B. Butcher*; Sm. no. 42276).	U.S. Nat. Mus. [P.].
f. ♂ ad. sk.	Puebla, Mexico.	A. Boucard [C.].
g. ♀ ad. sk.	Presidio, Mexico, April 30 (*A. Forrer*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Presidio, Jan. 17 (*A. Forrer*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Presidio, Feb. 13 (*A. Forrer*).	Salvin-Godman Coll.
k. ♂ imm. sk.	Silam, N. Yucatan, Oct. (*G. F. Gaumer*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Progreso, N. Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
m. Imm. sk.	Cozumel Island (*E. C. J. Devis*).	Salvin-Godman Coll.
n–t. ♂ ad. sk.	Cozumel Island, May (*G. F. Gaumer*).	Salvin-Godman Coll.
u, *v*, *w*, *x*, *y*. ♂; *z*, *a'*. ♀ ad.; *b'*, *c'*. ♂ imm. sk.	Ruatan Island (*G. F. Gaumer*).	Salvin-Godman Coll.
d', *e'*. ♂; *f'*, *g'*. ♀ ad. sk.	Jolbox Island (*G. F. Gaumer*).	Salvin-Godman Coll.
h', *i'*, *k'*. ♂ ad. sk.	Mugeres Island, Dec. (*G. F. Gaumer*).	Salvin-Godman Coll.
l'. ♂ ad. sk.	Meco Island, Nov. (*G. F. Gaumer*).	Salvin-Godman Coll.
m', ♂ ad.; *n'*. Imm. sk.	San Pedro, British Honduras (*G. Whitely*).	Sclater Coll.
o'. ♂ ad. sk.	San Pedro, British Honduras (*G. Whitely*).	Salvin-Godman Coll.
p'. ♂ ad. sk.	Guatemala.	J. Gould, Esq.
q'. ♂ ad. sk	Guatemala (*O. S.*).	Salvin-Godman Coll.
r'. ♂ ad. sk.	Volcan de Agua, above San Diego, Nov. (*O. S.*).	Salvin-Godman Coll.
s'. ♂ ad. sk.	Volcan de Agua, above San Diego, Nov. (*O. S.*).	Sclater Coll.
t'. ♂ ad. sk.	Coban, Vera Paz, Guatemala (*Constancia*).	Sclater Coll.

u'. Imm. sk.	Coban, Dec. (*O. S.*).	Salvin-Godman Coll.
v'. ♀ ad.; *w'*. ♂ juv. sk.	Escuintla, Guatemala, Jan. (*O. S.*).	Salvin-Godman Coll.
x' ♀ juv. sk.	Nicaragua, Jan. 31, 1883 (*C. C. Nutting*).	H. K. Coale, Esq. [P.].
y'. Juv. sk.	Nicaragua, Feb. 7, 1883 (*C. C. Nutting*).	H. K. Coale, Esq. [P.].
z'. ♂ ad. sk.	Southern slope of Volcan de Chiriqui, Panama (*E. Arcé*).	Salvin-Godman Coll.

2. Cyanospiza cyanea*.

The Blew Linnet, *Catesby, Nat. Hist. Carol.* i. p. 45, pl. 45 (1731).
Painted Finch, *Edwards, Nat. Hist. B.* iii. p. 130, pl. 130, lower fig. (1750).
Tangara bleu de la Caroline, *Briss. Orn.* iii. p. 13 (1760).
Tanagra cyanea, *Linn. Syst. Nat.* i. p. 315 (1766).
Le Ministre, *Montb. H. N. Ois.* iv. p. 86 (1778).
Indigo Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 205 (1783); *Penn. Arctic Zool.* ii. p. 365 (1785).
Emberiza cyanella, *Sparrm. Mus. Carls.* i. pp. 42, 43 (1787); *Gm. S. N.* i. p. 887 (1788).
Emberiza cyanea, *Gm. S. N.* i. p. 876 (1788).
Fringilla cyanea, *Wilson, Amer. Orn.* i. p. 100, pl. vi. fig. 5 (1810); *Bp. Amer. Orn.* ii. p. 91, pl. xv. fig. 4 (1828); *Audub. B. Amer.* i. p. 377 (1832), v. p. 503 (1839); *Jard. ed. Wils. Amer. Orn.* i. p. 100 (1832); *Nuttall, Man.* i. p. 473 (1832).
Passerina cyanea, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 7 (1817); *Lembeye, Av. Cuba*, p. 130 (1850); *Gray, Hand-l. B.* ii. p. 97, no. 7435 (1870); *Ridgw. Bull. U.S. Nat. Mus.* no. 4, p. 27 (1881); *Coues, Check-list*, p. 59 (1882); *Ridgw. Proc. U.S. Nat. Mus.* v. p. 495 (1883); *Coues, Key N. Amer. B.* p. 391 (1884); *A. O. U. Check-list N. Amer. B.* p. 288 (1886).
Spiza cyanea, *Jard. ed. Wils. Amer. Orn.* iii. p. 446 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Audub. B. Amer.* iii. p. 96, pl. clxx. (1841); *Giraud, B. Long Isl.* p. 110 (1844); *Gray, Gen. B.* ii. p. 375 (1849); *Bp. Consp.* i. p. 474 (1850); *Cab. Mus. Hein.* Th. i. p. 148 (1850); *Scl. P. Z. S.* 1856, p. 304; *Cab. J. f. O.* 1856, p. 8.
Cyanospiza cyanea, *Baird, B. N. Amer.* p. 505 (1858); *Scl. P. Z. S.* 1859, p. 379; *id. & Salv. Ibis*, 1859, p. 18; *Scl. Cat. Amer. B.* p. 107 (1862); *Lawr. Ann. Lyc. N. Y.* viii. p. 179 (1865); *Baird, Ibis*, 1867, p. 276; *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868), p. 201 (1869); *Taylor, Ibis*, 1868, p. 128; *Dugès, La Nat.* i. p. 140 (1869); *Sumich. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Frantz. J. f. O.* 1869, p. 301; *Salv. P. Z. S.* 1870, p. 190; *Allen, Bull. Mus. Comp. Zool.* ii. p. 178 (1872); *Salv. Ibis*, 1872,

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* The following has been supposed to be the same as *C. cyanea*. It seems to be very probably this species in winter plumage:—
Le Bruant bleu de Canada, *Briss. Orn.* iii. p. 298, pl. xiv. fig. 2 (1760).
L'Azuroux, *Montb. Ois.* iv. p. 369 (1778).
Blue Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 205 (1783); *Penn. Arct. Zool.* ii. p. 365 (1785).
Emberiza cærulea, *Gm. Syst. Nat.* i. p. 876 (1788).
Spiza cærulea, *Bp. Consp.* i. p. 474 (1850).

p. 317; *Coues, Key N. Amer. B.* p. 150 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 82, pl. 30. figs. 13, 17 (1874); *Coues, B. N.-West*, p. 171 (1874); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 20 (1875); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 20 (1878); *Merrill, Pr. U.S. Nat. Mus.* i. p. 128 (1878); *Cory, B. Bahamas*, p. 90 (1880); *Salv. Cat. Strickl. Coll.* p. 224 (1882); *Boucard, P. Z. S.* 1883, p. 444; *Nutting & Ridgw. Pr. U.S. Nat. Mus.* xi. pp. 373, 383, 392 (1884); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 364 (1886).

Adult male. General colour above blue, lighter and more cobalt on the rump and upper tail-coverts; lesser wing-coverts like the back; median and greater coverts black, externally bright purplish blue; bastard-wing, primary-coverts, quills, and tail-feathers dusky blackish, externally edged with pale blue, greyish on the edge of the primaries; head and neck more ultramarine; lores and eyelid blackish; under surface of body rich ultramarine, paler and more cobalt along the sides of the body and on the abdomen and under tail-coverts; axillaries and under wing-coverts light blue, the edge of the wing ultramarine; quills dusky below, ashy along the inner web: "bill brownish black, light blue beneath; feet yellowish brown; iris dark brown" (*Audubon*). Total length 5 inches, culmen 0·45, wing 2·85, tail 2·05, tarsus 0·65.

Adult male in winter plumage. Rufous-brown above, hiding the blue colour of the full livery; underneath ochraceous brown, whiter on the throat and abdomen, in each case concealing the underlying blue of the forthcoming summer dress; wings and tail as in summer, but the coverts edged with the same rufous-brown as the back; bill pale horny brown.

The spring plumage seems to be gained by a direct moult, and *not* by abrasion of the brown margins of the feathers as would have been expected.

Adult female. Different from the male. General colour above dark brown, rather more rufescent on the head and back, the mantle slightly mottled with dark brown centres to the feathers; lesser wing-coverts like the back; median and greater coverts dusky blackish, externally edged with brown, and margined with whity brown towards the ends; bastard-wing, primary-coverts, and quills dusky brown, externally edged with greyish blue, the inner secondaries margined with brown like the back; tail-feathers dusky brown, edged with pale greyish blue; lores dull white; cheeks and ear-coverts pale reddish brown; throat and under surface of body dull white; fore neck and chest as well as the sides of the body and flanks pale reddish brown, with some dark brown streaks on the fore neck, chest, and sides of breast; axillaries and under wing-coverts ochraceous buff with dusky centres; quills dusky below, ashy along the inner web. Total length 4·7 inches, culmen 0·4, wing 2·45, tail 1·9, tarsus 0·7.

The *winter plumage of the adult female* only differs from the summer plumage in having clearer whity-brown margins to the

wing-coverts and inner secondaries, and in having the primaries edged with brown instead of greyish blue.

Young birds at first resemble the old females, but are rather more dingy in colour. After the first moult they are also brown like the females, the young males being distinguished by the more distinct striping on the throat and fore neck.

Hab. Eastern United States, extending in winter throughout Central America to Panama; Bahamas, Cozumel, and adjacent islands.

a, b. ♂ ♀ ad. sk.	Libertyville, Illinois, Sept. 26 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. Juv. sk.	Camp Longfield, Illinois, July 30 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Oyster Bay, Long Island, Feb. (*Roosevelt*; Sm. no. 87005).	U.S. Nat. Mus. [P.].
e, f. ♂ ad. sk.	Washington, D.C. (*C. Drexler*; Sm. nos. 28624–5).	Salvin-Godman Coll.
g. ♀ ad. sk.	Pines Branch, D. Columbia, May 17 (*E. Coues*; Sm. no. 85056).	U.S. Nat. Mus. [P.].
h. ♀ ad.; *i.* ♂ juv. sk.	Rockbridge Co., Virginia (*J. C. Zeledon*; Sm. nos. 75249–50).	Salvin-Godman Coll.
k. ♂ ad. sk.	Indiana, May 17 (*R. Ridgway*; Sm. no. 90744).	U.S. Nat. Mus. [P.].
l. ♂ ad. sk.	Mexico.	Sclater Coll.
m. Juv. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
n, o. Juv. sk.	Cozumel Island (*C. J. E. Devis*).	Salvin-Godman Coll.
p, q, r. ♂ ad.; *s–x.* Imm. sk.	Cozumel Island (*G. F. Gaumer*).	Salvin-Godman Coll.
y, z. ♂ ad.; *a'–d'.* ♂ imm.; *e', f', g', h'.* Juv. sk.	Ruatan Island (*G. F. Gaumer*).	Salvin-Godman Coll.
i'. ♂ ad. sk.	Dueñas, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
k'. ♂ ad. sk.	Choctum, Vera Paz, Guatemala, Jan. (*O. S.*).	Salvin-Godman Coll.
l'. [♀ ad.] sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
m'. Juv. sk.	Coban, Nov. (*O. S.*).	Sclater Coll.
n'. ♂ ad. sk.	Guatemala (*Constancia*).	Sclater Coll.
o'. Juv. sk.	Guatemala.	J. Gould, Esq.
p'. ♂ ad. sk.	Belize, British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
q'. Ad. sk.	San Pedro, British Honduras (*G. M. Whitely*).	Salvin-Godman Coll.
r'. ♂ ad. sk.	Chontales, Nicaragua (*T. Belt*).	Salvin-Godman Coll.
s'. ♂ ad. sk.	Barranca, Costa Rica, Feb. 27 (*J. Carmiol*; Sm. no. 42896).	Salvin-Godman Coll.
t'. ♂ ad. sk.	San Josè, Costa Rica, Jan. 24 (*J. Carmiol*).	Salvin-Godman Coll.
u'. ♂ ad. sk.	Calovevora, Panama (*E. Arcé*).	Salvin-Godman Coll.

v'. ♂ ad. sk.	Bugaba, Panama (*E. Arcé*).	Salvin-Godman Coll.
w'. ♂ ad. sk.	Southern slope of Volcan de Chiriqui, Panama (*E. Arcé*).	Salvin-Godman Coll.
x', *y'*. ♂ ad. st.	North America.	J. Gould, Esq.

3. Cyanospiza amœna.

Emberiza amœna, *Say in Long's Exped.* ii. p. 47 (1823).

Fringilla amœna, *Bp. Amer. Orn.* i. p. 61, pl. vi. fig. 5 (1825); *Nutt. Man.* 1st ed. p. 473 (1832), 2nd ed. i. p. 546 (1840); *Aud. B. Amer.* pls. cccxcviii. & cccexxiv. fig. 1; *id. Orn. Biogr.* v. pp. 64, 230 (1839).

Spiza amœna, *Jard. ed. Wils. Amer. Orn.* iii. p. 317 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Aud. B. Amer.* iii. p. 100, pl. 171 (1841); *Gray, Gen. B.* ii. p. 375 (1849); *Bp. Consp.* i. p. 474 (1850).

Cyanospiza amœna, *Baird, B. N. Amer.* p. 504 (1858); *Blakist. Ibis*, 1863, p. 80; *Brown, Ibis*, 1864, p. 423; *Cooper, Orn. Calif.* p. 233 (1870); *Allen, Bull. Mus. C. Z.* iii. p. 178 (1872); *Merrill, Bull. U.S. Geol. Surv.* 1872, p. 683; *Coues, Key N. Amer. B.* p. 149 (1872); *Lawr. Mem. Bost. Soc. Nat. Hist.* ii. p. 276 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 84, pl. 30. figs. 11, 12 (1874); *Coues, B. N.-West*, p. 170 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 300 (1875); *Belding, Pr. U.S. Nat. Mus.* i. p. 418 (1879); *Cooper, op. cit.* ii. p. 248 (1880); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 363 (1886).

Passerina amœna, *Gray, Hand-l. B.* ii. p. 97, no. 7436 (1870); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 27 (1881); *Coues, Check-list N. Amer. B.* p. 59 (1882); *Nutting & Ridgw. Pr. U.S. Nat. Mus.* v. p. 541 (1883); *Coues, Key N. Amer. B.* p. 391 (1884); *A. O. U. Check-list N. Amer. B.* p. 288 (1886).

Adult male. General colour above blue, the mantle and upper back dusky blackish washed with blue; lesser wing-coverts like the back; median coverts white, forming a broad wing-band; greater coverts blackish, edged with dull blue and tipped with white; bastard-wing, primary-coverts, and quills blackish, edged externally with blue; upper tail-coverts rather duller blue than the rump, which is bright cobalt; tail-feathers blackish, edged with blue; crown of head bright blue, contrasting with the mantle; lores dusky washed with blue; ear-coverts, cheeks, throat, and sides of neck bright blue, as also the sides of the upper breast; fore neck and chest orange-rufous, extending down the sides of the breast, which is white like the abdomen and under tail-coverts; sides of body tinged with pale orange-rufous; flanks white; thighs blue; under wing-coverts and axillaries blue; quills below dusky, whitish along the inner web. Total length 5·4 inches, culmen 0·4, wing 2·9, tail 2·2, tarsus 0·6.

The *winter plumage of the adult male* resembles the summer plumage excepting that the whole of the brilliant colours are obscured by sandy margins and tips to the feathers, which wear off as the summer season advances. The white tips to the greater coverts are more distinct, and the inner secondaries are edged more conspicuously with whitish.

Some specimens, in full plumage, are more turquoise-blue than cobalt in tint. These may be the younger birds of the previous season.

Adult female. Different from the male. General colour above earthy brown, dingy greyish on the lower back, rump, and upper tail-coverts; lesser wing-coverts pale greyish blue; remainder of the coverts and quills dusky brown, narrowly margined with dingy blue, the median and greater coverts tipped with buffy white, forming two wing-bars; tail-feathers brown, margined with blue; crown of head like the back but with a bluish shade; lores whitish, as also the base of the forehead and eyelid; ear-coverts pale brown; cheeks, throat, fore neck, and breast pale sandy buff; the abdomen and under tail-coverts paler and more buffy whitish; sides of body and flanks pale sandy buff, with narrow dusky stripes; thighs brown; under wing-coverts and axillaries sandy buff, the edge of the wing bluish; quills below dusky, ashy along the inner webs. Total length 4·8 inches, culmen 0·35, wing 2·65, tail 2·1, tarsus 0·65.

Hab. Western North America from the plains to the Pacific, extending into Mexico.

a, b. ♂ ad. sk.	British Columbia (*J. K. Lord*).	N. A. Boundary Commission.
c, d. ♂ ad.; *e.* ♀ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P.].
f. ♀ ad. sk.	Camp Lowell, Arizona, Aug. 28, 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	California (*Xantus*).	Sclater Coll.
h. ♀ ad. sk.	California.	Sclater Coll.
i. ♂ ad. sk.	N. California, May 26 (*C. H. Townsend*; Sm. no. 91694).	U.S. Nat. Mus. [P.].
k. ♀ ad. sk.	Walker's Basin, California, Aug. 28 (*H. W. Henshaw*; Sm. no. 79652).	Salvin-Godman Coll.
l. ♂ ad. sk.	Fort Tejon, Lower California, June 19 (*J. Xantus*; Sm. no. 25523).	Salvin-Godman Coll.
m. ♂ ad. sk.	California.	J. Gould, Esq.
n. ♂ ad. sk.	Haywards, California, June 21, 1881 (*W. O. Emerson*).	H. K. Coale, Esq. [P.].
o. ♂ ad. sk.	Bear Valley, California, June 24, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
p. ♀ ad. sk.	Ogden, Utah, June 21 (*C. H. Merriam*; Sm. no. 61712).	U.S. Nat. Mus. [P.].
q. ♂ ad. sk.	Great Salt Lake City, May 27 (*R. Ridgway*; Sm. no. 58596).	Salvin-Godman Coll.
r. ♂ ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.
s. ♂ ad. st.	Mexico.	Purchased.

4. Cyanospiza rositæ.

Cyanospiza rositæ, *Lawr. Ann. Lyc. N. Y.* x. p. 397 (1874); *Salv. Ibis*, 1874, p. 309; *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 20 (1875); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 364, pl. xxv. (1885).

Adult male. General colour above brilliant blue, more distinctly

cobalt on the rump and upper tail-coverts; lesser and median and greater coverts like the back, some of the outer greater coverts duller blue like the bastard-wing and primary-coverts; quills blackish, externally edged with greenish blue, the inner secondaries washed externally with bright blue like the back; tail-feathers blue, dusky on the inner webs; crown of head richer blue than the back; lores dusky blackish; eyelid white; ear-coverts, cheeks, throat, sides of neck, and fore neck brilliant blue, the latter slightly varied with vermilion bases to the feathers, which become more distinct on the chest and breast, the latter being vermilion, hidden by blue tips to the feathers; abdomen and under tail-coverts pale salmon-red; sides of body and flanks bright blue; thighs blue; under wing-coverts silky white, those near the edge of the wing blue; axillaries blue, with ashy bases; quills below dusky, ashy along the inner web: "upper mandible blackish, the lower one pale bluish: feet livid plumbeous; iris brown" (*Sumichrast*). Total length 5·4 inches, culmen 0·6, wing 2·5, tail 2·1, tarsus 0·65.

Adult female. Different from the male. General colour above brown, with a slight greenish tinge on the back, the lower back and rump dull blue, a little brighter on the upper tail-coverts; wing-coverts dusky, edged with the same colour as the back; the bastard-wing washed with pale blue; primary-coverts like the greater series; quills dusky, edged with greyish blue, the secondaries externally like the back; ttil-feathers dull blue, with brighter blue margins; crown of head and sides of face a little more dingy than the back, with a lilac gloss; lores dusky; eyelid whitish; under surface of body deep sandy buff, paler on the abdomen and under tail-coverts, which are faintly tinged with red; on the throat and breast a more distinct red shade; under wing-coverts silky white except the outer ones, which are sandy buff like the axillaries; quills below dusky, whitish along the inner edge. Total length 5·2 inches, culmen 0·55, wing 2·75, tail 2·1, tarsus 0·65.

Another female specimen, apparently younger, has not so much blue on the lower back and rump, and wants the red on the under surface.

The young male at first resembles the adult female, but is darker and more olive-brown above, without the subdued lilac tinge on the head. The full plumage is gained by a moult.

Hab. Isthmus of Tehuantepec, Mexico.

a. ♂ ad.; *b, c.* ♀ ad. sk.	Tehuantepec (*F. Sumichrast*).	Salvin-Godman Coll.
d, e, f. ♂ ad.; *g.* Juv. sk.	Cacoprieto, Tehuantepec, Jan. (*F. Sumichrast*).	Salvin-Godman Coll.

5. Cyanospiza leclancheri.

Passerina leclancheri, *Lafr. Rev. Zool.* 1840, p. 260; *id. Mag. de Zool.* 1841, *Oiseaux*, pl. 22; *Gray, Hand-l. B.* ii. p. 97, no. 7439 (1870).

Spiza leclancheri, *Lafr. Mag. de Zool.* 1841, *Oiseaux*, text to pl. 22; *Gray, Gen. B.* ii. p. 515 (1849); *Bp. Consp.* i. p. 475 (1850).

Calliste leclancheri, *Bp. Consp.* i. p. 235 (1850).

Cyanospiza leclancheri, *Dubs, La Nat.* i. p. 140 (1869); *Scl. & Salv. P. Z. S.* 1870, p. 551; *iid. Nomencl. Av. Neotr.* p. 29 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874); *id. Bull. U. S. Nat. Mus.* no. 4, p. 20 (1875); *Salv. P. Z. S.* 1883, p. 421; *id. & Godm. Biol. Centr.-Amer., Aves*, i. p. 364 (1886).

Adult male. General colour above cobalt-blue, the mantle and upper back washed with dull green; lesser and median wing-coverts bright cobalt, as also the bastard-wing; greater coverts dusky, externally blue, slightly tinged with greenish; primary-coverts and quills dusky blackish, externally greenish blue, the primaries edged with hoary whitish towards the ends, the inner secondaries edged with yellowish at the tip; tail-feathers pale greenish blue, dusky internally; crown of head olive-yellow tinged with green; lores and a ring round the eye bright golden yellow; ear-coverts and sides of neck bright cobalt-blue like the hind neck; cheeks and under surface of body golden yellow, rich orange on the throat and breast, becoming much paler yellow on the abdomen and under tail-coverts; axillaries yellow like the breast; under wing-coverts white, washed with yellow, the edge of the wing and adjoining coverts blue; quills dusky below, whitish along the inner web: "upper mandible brown, lower one fleshy; feet brownish; iris brown" (*Sumichrast*). Total length 5 inches, culmen 0·45, wing 2·95, tail 2·2, tarsus 0·7.

Adult female. Different from the male and much duller in colour. Above dull olive-greenish, the rump a little brighter, the upper tail-coverts blue; wing-coverts like the back, shaded with blue on the median series and bastard-wing; quills dusky, externally greenish, the primaries rather more blue along the outer webs; tail light blue; head olive-yellowish, lighter than the back; lores and a ring round the eye yellow; ear-coverts dull blue; sides of neck and hind neck greenish grey; cheeks and under surface of body yellow, rather deeper on the fore neck and chest; axillaries pale yellow; under wing-coverts white, washed with yellow; quills dusky below, ashy along the inner web. Total length 4·7 inches, culmen 0·45, wing 2·9, tail 2·2, tarsus 0·65.

Hab. Western Mexico.

a, b. ♂ ♀ ad. sk.	S. Juan del Rio, Mexico (*Rébouch*).	Sclater Coll.
c. ♂ ad. sk.	S. Juan del Rio, Mexico (*Rébouch*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Tehuantepec (*F. Sumichrast*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Cacoprieto, Tehuantepec (*F. Sumichrast*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Acapulco, Mexico, March (*A. H. Markham*).	Salvin-Godman Coll.

6. Cyanospiza versicolor.

Spiza versicolor, *Bp. P. Z. S.* 1837, p. 120; *Gray, Gen. B.* ii. p. 375 (1849); *Bp. Consp.* i. p. 475 (1850); *Cab. Mus. Hein.* Th. i. p. 148 (1850); *Scl. P. Z. S.* 1857, p. 214, 1859, p. 365; *Dugès, La Nat.* i. p. 140 (1869).

Carduelis luxuosus, *Less. Rev. Zool.* 1832, p. 415.
Fringilla lazulina, *Licht. in Mus. Berol.* (*teste Bp.*).
Spiza lazulina, *Licht. Nomencl. Av. Berol.* p. 45 (1854).
Cyanospiza versicolor, *Baird, B. N. Amer.* p. 503, pl. lvi. fig. 2 (1858); *Scl. P. Z. S.* 1859, p. 379; *Scl. & Salv. Ibis*, 1859, p. 17; *Scl. Cat. Amer. B.* p. 107 (1862); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869); *Cooper, B. Calif.* p. 234 (1870); *Coues, Key N. Amer. B.* p. 149 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 29 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 86 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 276 (1874); *Merrill, Pr. U.S. Nat. Mus.* i. p. 128 (1878); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 20 (1878), v. p. 393 (1879); *Salv. Cat. Strickl. Coll.* p. 224 (1882); *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 361 (1886).
Passerina versicolor, *Gray, Hand-l. B.* ii. p. 97, no. 7438 (1870); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 27 (1881); *Coues, Check-l.* p. 59 (1882); *id. Key N. Amer. B.* 2nd ed. p. 391 (1884); *A. O. U. Check-list N. Amer. B.* p. 288 (1886).

Adult male. General colour above purplish red, the lower back, rump, and upper tail-coverts lilac-blue; lesser wing-coverts lilac-blue; median coverts purplish red, with black bases; greater coverts blackish, edged and tipped with purplish red; bastard-wing, primary-coverts, and quills dusky blackish, externally edged with greyish blue, the inner secondaries washed with dull purplish red; tail-feathers blackish, edged with blue; crown of head vinous-red, lighter than the purplish-red mantle; forehead lilac-blue, extending backwards over the eyes, and also forming a collar round the hind neck; lores and base of forehead, feathers under the eye, and base of cheeks black; eyelid scarlet; ear-coverts, cheeks, and sides of neck lilac-blue; under surface of body purplish red, the chin black; throat dull scarlet; fore neck and breast purplish red, becoming more distinctly purple on the abdomen, sides of body, and flanks; thighs and under tail-coverts purplish blue, with pale sandy edges to the feathers; under wing-coverts and axillaries purplish blue, the edge of the wing purplish red; quills below dusky, ashy on their inner web: "bill horn-colour; feet hazel-brown" (*Salvin and Godman*). Total length 5 inches, culmen 0·45, wing 2·6, tail 2·1, tarsus 0·7.

The *adult male in winter plumage* preserves the coloration of the summer plumage, but has the whole of the feathers obscured by sandy-coloured edges, which apparently wear off when the full dress is assumed.

Adult female. Different from the male. General colour above dark sandy brown, rather more ashy on the upper tail-coverts; lesser wing-coverts like the back; median and greater coverts dusky, edged and broadly tipped with pale sandy brown; bastard-wing, primary-coverts, and quills dusky, edged with ashy grey, the inner secondaries with pale sandy brown; tail-feathers dusky, edged with ashy grey; crown of head like the back; lores and eyelid buffy whitish; ear-coverts dark brown, with shaft-lines of buffy whitish; cheeks and under surface of body deep sandy buff, paler on the chin,

and on the lower breast and abdomen, sides of body, and flanks; thighs and under tail-coverts somewhat paler; under wing-coverts and axillaries like the breast; quills below dusky, fulvous along the inner web. Total length 4·6 inches, culmen 0·4, wing 2·35, tail 2, tarsus 0·7.

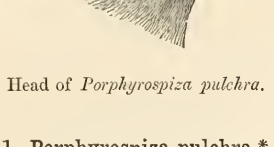
Hab. Texas; Michigan rarely; Lower California, breeding. Central America: Mexico and Guatemala.

a. ♂ ad. sk.	Mexico.	Sclater Coll.
b. ♂ ad. sk.	Orizaba, Mexico.	Sclater Coll.
c, *d*. ♂ ♀ ad.; *e*. ♀ juv. sk.	Presidio, W. Mexico, Feb. 13 (*A. Forrer*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Presidio, Jan. 19 (*A. Forrer*).	Salvin-Godman Coll.
g. Imm. sk.	Mazatlan, December 26 (*A. Forrer*).	Salvin-Godman Coll.
h, *i*. Ad. st.	Mexico.	Purchased.
k. ♂ ad. sk.	Guatemala.	G. U. Skinner, Esq. [C.].

64. PORPHYROSPIZA.

Type.

Porphyrospiza, *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873) ..... P. pulchra.



Head of *Porphyrospiza pulchra*.

Range. Brazil.

1. Porphyrospiza pulchra *.

? Spiza cærulea, *Bp. Consp.* i. p. 474 (1850).
Cyanospiza cyanella, *Pelz. Orn. Bras.* p. 227 (1871).
Porphyrospiza cyanella, *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873).
Porphyriospiza cyanella, *Salv. Cat. Strickl. Coll.* p. 226 (1882).

Adult male. General colour above dark blue; lesser wing-coverts bright cobalt, forming a shoulder-patch; median and greater coverts blackish, edged with a little brighter blue than the back; bastard-wing, primary-coverts, and quills blackish, edged with blue like the back; upper tail-coverts like the back; tail-feathers blackish, edged with blue like the back; crown of head like the

* This species is generally known as *P. cyanella*, founded on the *Emberiza cyanella* of Sparrman (Mus. Carls. fasc. ii. pls. 42, 43, 1787). Sparrman's plates appear to me to represent without a shadow of doubt *Cyanospiza cyanea* (L.), and it is extremely unlikely that he had the opportunity of figuring such a rare bird as the present species, to which a new name must be assigned.

back; lores blackish; feathers above the eye, sides of face and ear-coverts rather brighter blue, as also the cheeks, throat, and under surface of the body; abdomen rather more ashy blue; thighs and under tail-coverts blue; under wing-coverts and axillaries like the breast; quills below dusky, rather more ashy on the inner edge. Total length 5·5 inches, culmen 0·4, wing 2·4, tail 2·25, tarsus 0·75.

This species has a distinct *seasonal plumage*, when the blue is obscured by brown edgings to the feathers; the bill, as in so many other Finches, becomes brown on the upper mandible instead of being entirely yellow.

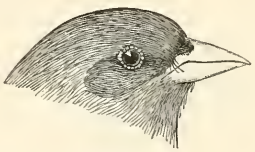
Hab. Brazil.

a. ♂ ad. sk.	Furnas, Brazil, Jan. 15, 182 (*J. Natterer*).	Sclater Coll.
b. ♂ ad. sk.	Furnas, May 15, 1823 (*J. Natterer*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Bahia (*Dr. Lushnath*).	Salvin-Godman Coll.

65. HAPLOSPIZA.

Type.

Haplospiza, *Cab. Mus. Hein.* Th. i. p. 147 (1850) .... H. unicolor.



Head of *Haplospiza unicolor*.

Range. Brazil; Mexico.

1. Haplospiza unicolor.

Tanagra unicolor, *Licht. in Mus. Berol.*

Haplospiza unicolor, *Cab. Mus. Hein.* Th. i. p. 147 (1850); *Scl. Cat. Amer. B.* p. 108 (1862); *Scl. & Salvin, Nomencl. Av. Neotr.* p. 29 (1873); *Salvin, Cat. Strickl. Coll.* p. 225 (1882); *Berl. & Hering, in Madarász's Zeitschr. ges. Orn.* ii. p. 123, pl. viii. figs. 1, 2 (1885).

Spiza unicolor, *Licht. Nomencl. Av. Neotr.* p. 45 (1854).

Passerina carbonaria, *Gray, Hand-l. B.* ii. p. 98, no. 7450 (1870).

Passerina unicolor, *Gray, t. c.* p. 98, no. 7451 (1870).

Adult male. General colour above slaty grey; lesser wing-coverts somewhat more bluish slate-colour than the back; median and greater coverts externally edged with ashy grey, rather more hoary on the margin of the primaries; bastard-wing, primary-coverts, and quills blackish; upper tail-coverts like back; tail-feathers blackish, edged with slaty grey; crown of head like back; lores and feathers round eye dark slaty grey; ear-coverts and cheeks dark slaty grey, with indistinct whitish shaft-lines; sides of neck and under surface of body bluish slate-colour, rather lighter than the

back; under tail-coverts edged with whitish; under wing-coverts slaty blue; axillaries slaty grey like the breast; quills below dusky blackish, the inner edge more ashy. Total length 4·7 inches, culmen 0·5, wing 2·6, tail 1·95, tarsus 0·75.

Adult female. Different from the male. General colour above uniform olive-green; lesser wing-coverts glossy olive-green; median and greater coverts dusky, externally edged and tipped with dull olive-green; bastard-wing and primary-coverts dusky brown; quills dusky brown, externally olive-brown; tail-feathers dusky brown, externally edged with olive-green; crown of head and neck uniform olive-green like the back, with a faint streak of lighter olive over the eye; sides of face, ear-coverts, and cheeks olive-green; throat and under surface of body ashy olive, a little clearer and more yellowish olive on the throat; the sides of the body, flanks, and thighs uniform olive-green; throat, fore neck, and breast streaked with dusky-brown centres to the feathers; under tail-coverts yellowish white, with dusky bases; under wing-coverts and axillaries olive-green, the latter edged with yellow; quills dusky below, ashy along the edge of the inner web. Total length 4·7 inches, culmen 0·45, wing 2·6, tail 1·85, tarsus 0·7.

Hab. Brazil.

a, b, c. ♂ ad. sk.	Pelotas, Rio Grande do Sul, Brazil (*Joyner*).	Salvin-Godman Coll.
d. Ad. sk.	Brazil.	J. Gould, Esq.
e, f. Ad. sk.	Brazil.	Sclater Coll.
g, h. ♂; *i.* ♀ ad. st.	Brazil.	Purchased.
k. ♀ ad. sk.	Brazil.	Purchased.
l. ♂ ad. sk.	Ypanema, Brazil, April (*J. Natterer*).	Salvin-Godman Coll.

2. Haplospiza uniformis.

Haplospiza uniformis, *Scl. & Salv. Nomencl. Av. Neotr.* pp. 29, 157 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 366, tab. xxvii. fig. 1 (1886).

Adult (type of species). Similar to *H. unicolor*, but larger and darker in every way; leaden-grey above and darker slate-colour below. Total length 5·2 inches, culmen 0·55, wing 2·9, tail 1·95, tarsus 0·75.

Hab. Mexico.

a. Ad. sk.	Jalapa, S. Mexico (*De Oca*).	Salvin-Godman Coll. (Type of species.)

66. AMPHISPIZA.

Type.

Amphispiza, *Coues, B. N.-West,* p. 234 (1874)..... A. bilineata.

Range. Western United States to Mexico, eastwards to Western Texas, north to the Great Basin.

Key to the Species.

a. Throat black; no yellow on the edge of the wing..... *bilineata* ♂, p. 628.

b. No black on the throat.
a'. No yellow on the edge of the wings; fore neck and chest streaked with dusky..... *bilineata* ♀, p. 629.
b'. Edge of wing distinctly yellow.
a''. With a broad moustachial streak of black, contrasting with the white cheeks; back nearly uniform ..... *belli*, p. 629.
b''. With no distinct moustachial streak, the cheeks and throat white; back distinctly streaked with black ..... *nevadensis*, p. 630.
c. Throat black, white down the centre; sides of body dark ashy ..... *quinquestriata*, [p. 632.

1. Amphispiza bilineata.

Emberiza bilineata, *Cass. Proc. Philad. Acad.* 1850, p. 104; *id. Ill. Orn. Calif.* p. 150, pl. 23 (1856).

Poospiza bilineata, *Sclater, P. Z. S.* 1857, p. 7; *Baird, B. N. Amer.* p. 470 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 15 (1858); *Scl. Cat. Amer. B.* p. 110 (1862); *Dresser, Ibis*, 1865, p. 488; *Coues, t. c.* p. 164; *id. Proc. Philad. Acad.* 1866, p. 86; *Gray, Hand-l. B.* ii. p. 68, no. 7468 (1870); *Cooper, B. Calif.* p. 203 (1870); *Coues, Key N. Amer. B.* p. 140 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 590, pl. 26. fig. 8 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 274 (1875).

Amphispiza bilineata, *Coues, B. N.-West*, p. 234 (1874); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 18 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 127 (1878); *Ridgw. op. cit.* iii. p. 217 (1881); *Brewst. Bull. Nutt. Orn. Club*, vii. p. 195 (1882); *Coues, Check-list N. Amer. B.* p. 55 (1882); *Belding, Proc. U.S. Nat. Mus.* v. pp. 529, 531, 540 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 376 (1884); *Belding, Proc. U.S. Nat. Mus.* vi. p. 343 (1883); *Stephens, Auk*, ii. pp. 226, 228 (1885); *A. O. U. Check-list N. Amer. B.* p. 276 (1886); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 367 (1886).

Adult male. General colour above brown, including the lower back and rump; lesser wing-coverts a little more ashy than the back; median and greater coverts brown, rather more ashy on the outer ones, which are paler towards the ends of the outer webs; bastard-wing, primary-coverts, and quills blackish brown, edged with ashy, more hoary on the edge of the primaries, the secondaries edged with brown; upper tail-coverts more ashy than the back; tail-feathers blackish, edged with brown, the two outer ones edged with white and having a white spot at the end of the inner web, larger on the outermost feather; crown of head and hind neck decidedly more ashy grey than the back; lores and feathers below the eye black; a narrow white eyebrow, surrounded by a narrow line of black; ear-coverts and sides of neck dark ashy grey; cheeks white, forming a distinct moustache; throat and fore neck black, extending in a point to the chest; sides of fore neck, breast and abdomen white; sides of upper breast ashy; sides of body and flanks ashy brown; thighs brown; under tail-coverts white; under wing-coverts and axillaries white, those near the edge of the wing

ashy brown; quills below dusky, ashy along the inner edge. Total length 4·8 inches, culmen 0·45, wing 2·5, tail 2·2, tarsus 0·7.

Adult male in winter plumage. Only differs from the summer plumage in having the head brown like the back, and the sides of the body also somewhat browner.

Adult female. Like the male, but a little browner on the head and not so ashy. Total length 4·8 inches, culmen 0·45, wing 2·4, tail 2·1, tarsus 0·7.

Young. Browner than the adults, and having dusky blackish spots at the end of the dorsal feathers; the under surface streaked narrowly with blackish; wing-coverts and inner secondaries broadly edged with rufescent brown, paler on the median and greater coverts, where it forms a double wing-bar.

Dr. Coues describes the young plumage as follows:—"The head-markings obscure; little or no black on throat; a few pectoral streaks; owing to absence of black on the throat, the white maxillary stripe is ill-defined, but the other stripe is conspicuous. Back rather brown than ashy; tail blackish, not pure black."

Hab. Western United States, from Western Texas and the Indian Territory west to California, north throughout the Great Basin, and south into Mexico.

a. ♂ ad. sk.	Nevada, July 1871 (*F. Bischoff*; Sm. no. 62946).	R. B. Sharpe, Esq. [P.].
b. ♀ juv. sk.	Tucson, Arizona, July 27, 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
c. ♂ ad. sk.	Tucson, July 29, 1884 (*F. Stephens*).	H. K. Coale, Esq. [P.].
d. ♀ ad. sk.	Camp Lowell, Arizona, May 16, 1884 (*F. Stephens*).	H. K. Coale, Esq. [P.].
e. ♀ ad. sk.	La Paz, Lower California, Dec. 10 (*A. Forrer*).	Salvin-Godman Coll.
f. ♂ juv. sk.	La Paz, April 12 (*A. Forrer*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Cohuilla Valley, California, May 4, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
h. ♀ ad. sk.	Texas (*G. B. Sennett*; Sm. no. 73718).	U.S. Nat. Mus. [P.].
i. ♂ ad. sk.	Texas, July 1853 (*Lieut. Parker*; Sm. no. 6321).	U.S. Nat. Mus. [P.].
k. ♀ ad. sk.	Laredo, Texas, June 29, 1866 (*Dr. H. B. Butcher*; Sm. no. 45256).	U.S. Nat. Mus. [P.].
l, *m.* ♂ ad.; *n.* ♀ juv. sk.	Mexico.	Salvin-Godman Coll.
o. Ad. sk.	Mexico.	Sclater Coll.
p. Ad. sk.	Mexico.	Purchased.

2. Amphispiza belli.

Emberiza belli, *Cass. Proc. Philad. Acad.* 1850, p. 104, pl. 4.
Poospiza belli, *Sclater, P. Z. S.* 1857, p. 7; *Baird, B. N. Amer.* p. 470 (1858); *Scl. Cat. Amer. B.* p. 110 (1862); *Coues, Proc. Philad. Acad.* 1866, p. 86; *Cooper, B. Calif.* p. 204 (1870); *Gray, Hand-l.B.* ii. p. 98, no. 7465 (1870); *Allen, Bull. Mus. Comp.*

Zool. iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 141 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 593, pl. 26. fig. 9 (1874).

Zonotrichia belli, *Elliot, New & Unfig. Birds of N. Amer.* i. pl. 14 (1869).

Amphispiza belli, *Coues, B. N.-West*, p. 234 (1874); *Belding, Proc. U.S. Nat. Mus.* i. p. 416 (1879); *Ridgw. op. cit.* iii. p. 180 (1881); *Coues, Check-list N. Amer. B.* p. 55 (1882); *Belding, Proc. U.S. Nat. Mus.* v. p. 532 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 376 (1884); *Drew, Auk*, i. p. 16 (1884); *A. O. U. Check-list N. Amer. B.* p. 276 (1886); *Everm. Auk*, iii. p. 182 (1886).

Adult male. General colour above dark brown, slightly washed with ashy on the mantle and upper back; the middle of the back indistinctly streaked with black; lesser wing-coverts brown, washed with olive-yellow; median coverts dark brown, tipped with pale fawn-colour; greater coverts dark brown, edged with lighter brown and tipped with pale fawn-colour; bastard-wing and primary-coverts dusky brown, edged with ashy; quills dark brown, edged with ashy olive, the first primary with whity brown, the secondaries externally fawn-brown; upper tail-coverts dark brown; tail-feathers blackish brown, edged with fawn-brown, fringed with white at the tips of the inner web of the outer feathers, the outermost of which has an irregular whity-brown spot near the end of the inner web, and is margined externally all the way with whity brown; crown of head uniform brown, but slightly washed with ashy; the base of the forehead blackish, with a small linear mark of white at the base of the bill; lores black, surmounted by a large white spot; feathers below the eye black, faintly mottled with greyish white; eyelid white; ear-coverts dark ash-brown like the sides of the neck; cheeks and throat white, with a broad malar stripe widening out on the sides of the lower throat; fore-neck and remainder of under surface of body dull white, with a patch of black in the centre of the chest; lower abdomen tinged with pale fawn-colour; sides of body and flanks entirely fawn-colour, narrowly streaked with black, a little more broadly on the sides of the upper breast; thighs buffy white; under tail-coverts pale fawn-buff, with pale dusky centres; under wing-coverts and axillaries olive-yellow, the edge of the wing brighter yellow; quills below dusky, the inner edge ashy fulvous. Total length 6 inches, culmen 0·45, wing 2·6, tail 2·7, tarsus 0·75.

Hab. California.

a. Ad. sk.	California.	P. L. Sclater, Esq. [P.].
b. Ad. sk.	California (*Bell*).	Sclater Coll.
c. Ad. sk.	California (*Heermann*).	Salvin-Godman Coll.

Subsp. *a*. **Amphispiza nevadensis.**

Poospiza belli (*nec Cass.*), *Kennerley, Pacif. R. Rep. Whipple's Route*, p. 29 (1859); *Coues, Ibis*, 1865, p. 164; *id. Proc. Philad. Acad.* 1866, p. 86; *Allen, Bull. Mus. Comp. Zool.* iii. p. 177 (1872).

Poospiza belli, var. nevadensis, *Ridgw. Bull. Essex Inst.* v. p. 191 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 594 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 275 (1875).
Amphispiza belli, var. nevadensis, *Coues, B. N.-West*, p. 234 (1874).
Amphispiza belli nevadensis, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 180 (1881); *Coues, Check-list N. Amer. B.* p. 55 (1882); *id. Key N. Amer. B.* 2nd ed. p. 376 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list*, p. 277 (1886).

Adult. General colour above pale ashy brown, narrowly but distinctly streaked with blackish, the rump and upper tail-coverts uniform ashy brown; lesser wing-coverts sandy brown; median and greater coverts dark brown, edged with paler brown and tipped with white, forming a double wing-bar; bastard-wing, primary-coverts, and quills dusky brown, edged with pale ashy, the inner secondaries with brown; tail-feathers blackish, edged with pale brown; the outer ones fringed with white along the tip of the inner web, the outermost externally edged with white and having a white mark at the end of the inner web; crown of head and hind neck uniform ashy grey, contrasting with the back; base of forehead blackish, with a small white spot; lores and feathers below the eye blackish, with a small spot of white above the lores; eyelid white; ear-coverts dark ashy grey; cheeks white, separated by a narrow malar stripe of black from the throat, which is also white like the rest of the under surface of the body; the black malar stripe continued on to the sides of the chest in the shape of small linear spots; in the centre of the fore neck a streak of black; abdomen white; sides of body and flanks tinged with ashy fulvous, and broadly streaked with black; thighs and under tail-coverts white; under wing-coverts and axillaries white, slightly tinged with olive-yellow; quills below dusky, ashy along the inner edge. Total length 5·6 inches, culmen 0·45, wing 3, tail 2·7, tarsus 0·85.

The *winter plumage* of the adult male only differs from the summer dress in being a little more mealy, the facial and other markings on the underparts being more obscured; the ashy head is shaded with brown like the back, on which the black streaks are less distinct; the wing-coverts are broadly tipped with pale fawn-colour, and the inner secondaries broadly edged with the same colour; the sides of the body and flanks are also pale fawn-colour, streaked with blackish; the black malar streak and the black on the centre of the breast are both feebly indicated.

Hab. British Columbia; South-eastern Wyoming, Utah, and Nevada, south to Arizona and Mexico, and east to Colorado and New Mexico.

a, b. Ad. sk.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].
c. Ad. sk.	Carson City, Nevada, Aug. 27 (*H. W. Henshaw*; Sm. no. 72330).	Salvin-Godman Coll.
d. ♂ ad. sk.	Carson City, Nevada, May 12 (*H. W. Henshaw*; Sm. no. 77651).	Salvin-Godman Coll.

e. ♂ ad. sk.	Camp No. 17, 40th Parallel, Sept. 2, 1867 (*R. Ridgway*; Sm. no. 53515).	Salvin-Godman Coll.
f. ♂ ad. sk.	Fort Bridger, Utah, May 12, 1858 (*C. Drexler*; Sm. no. 11201).	Salvin-Godman Coll.
g. ♂ ad. sk.	California, Aug. 21 (*C. E. Aiken*; Sm. no. 69558).	U.S. Nat. Museum.
h. ♂ ad. sk.	San Bernardino, April 1, 1883 (*R. B. Herron*).	H. K. Coale, Esq. [P.].

3. Amphispiza quinquestriata.

Zonotrichia quinquestriata, *Scl. & Salv. P. Z. S.* 1868, p. 323; *Gray, Hand-l. B.* ii. p. 94, no. 7386 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873).
Amphispiza quinquestriata, *Ridgw. Ibis*, 1883, p. 400; *Salv. & Godm. Biol. Centr.-Amer., Aves*, i. p. 368, pl. 27. fig. 2 (1886).

Adult (type of species). General colour above reddish chocolate-brown, slightly washed with ashy margins to the feathers, the lower back and rump more decidedly ashy; wing-coverts like the back, edged with ashy grey; quills brown, externally edged with reddish brown, the primaries with ashy; upper tail-coverts and tail-feathers dark chocolate-brown, with ashy margins, the outer feather fringed externally and round the tip with white; head like the back, the forehead distinctly ashy; a narrow eyebrow white, surmounted by an indistinct dusky line; upper and under edge of eyelid white; anterior and posterior margin of eyelid chocolate-brown, like the lores, feathers below the eye, and ear-coverts; a line of white along the cheeks, hinder part of the latter grey, like the sides of the neck, the latter washed with brown; malar line and a broad band down each side of the throat black, the latter with a broad median band of white; lower throat and remainder of under surface of body dark slaty grey, the centre of the breast and centre of the abdomen white; on the chest a longitudinal patch of black; thighs and under tail-coverts ashy, broadly edged with white; axillaries and under wing-coverts chocolate-brown, edged with white; quills dusky below, more ashy along the inner web. Total length 6·2 inches, culmen 0·55, wing 2·7, tail 2·45, tarsus 0·8.

Hab. Mexico.

a. Ad. sk.	Mexico.	Sclater Coll. (Type of species.)

67. POOSPIZA.

Type.
Poospiza, *Cab. Arch. f. Naturg.* xiii. p. 349 (1847)..... P. thoracica.

Range. South America: Brazil, Peru, and Bolivia, extending into Mendoza and Northern Patagonia.

Key to the Species.

a. With no black collar across the throat.
a'. With no rufous on the rump.

a''. With white or buffy-white throat.
a'''. With a rufous band across the chest, uniform with rufous flanks.
*a*⁴. With no white eyebrow; an alar speculum formed by white bases to outer web of primaries; wing 2·55 inches ..... *thoracica*, p. 634.
*b*⁴. With a white eyebrow; no alar speculum; wing 3 inches ..... *boliviana*, p. 634.
b'''. Chest bright chestnut; sides of body slaty grey; wing 3·3–3·5 inches .... *cæsar*, p. 635.
c'''. Chest grey; sides of body chestnut .. *hypochondriaca*, p. 636.
d'''. No rufous or grey on the chest, the throat and breast being white like the rest of the under surface.
*c*⁴. Some narrow streaks on the fore neck.
*a*⁵. A supraloral streak of white; no white eyebrow; a black spot in the centre of the breast.
*b*⁵. A distinct superciliary streak of white..... *bonapartii* ♀, p. 637.
*d*⁴. No streaks on the under surface of body; upper surface uniform bluish grey.
*c*⁵. Crown black, forming a cap..... *melanoleuca* ad., p. 638.
*d*⁵. Crown like the back.
*a*⁶. Larger; wing 2·4–2·5 inches .. *cinerea*, p. 639.
*b*⁶. Smaller; wing 2·05–2·15 inches *melanoleuca* imm., [p. 638.
b''. Throat rufous or chestnut.
e'''. Eyebrow white, posteriorly chestnut.
*e*⁴. Above dusky; underneath chestnut; abdomen white ..... *personata*, p. 640.
*f*⁴. Above dark slaty grey; throat and sides of body deep maroon; centre of breast and abdomen white ..... *whitii*, p. 641.
f'''. Eyebrow rufous or pale chestnut.
*g*⁴. Above uniform, the head scarcely different from the back; one wing-band of white formed by the tips of the greater coverts ..... *erythrophrys*, p. 642.
*h*⁴. Head and hind neck slaty grey, contrasting with the chestnut-brown back; a double wing-bar, one formed by the median wing-coverts and a second narrower one by the tips of the greater coverts ..... *ornata*, p. 643.
b'. With the rump and upper tail-coverts rufous; flanks rufous or chestnut.
c''. Larger; wing 2·8 inches: throat tawny buff; a supraloral streak of white..... *lateralis*, p. 643.
d''. Smaller; wing 2·4 inches: throat pale ashy; no white streak above the lores.. *assimilis*, p. 644.
b. With a black collar across the fore neck.
c'. Bill much larger, culmen 0·55 inch: under tail-coverts pale tawny buff ..... *bonapartii* ♂, p. 637.
d'. Bill much smaller, culmen 0·4–0·45 inch; under tail-coverts deep chestnut ..... *torquata*, p. 645.

1. Poospiza thoracica.

Fringilla thoracica, *Nordm. in Erman's Reise*, p. 10, Taf. iv. fig. 1 (1835).
Pipillo rufitorques, *Swains. An. in Menag.* p. 312 (1837).
Carduelis rufigularis, *Less. Rev. Zool.* 1839, p. 42.
Pipilo thoracica, *Gray, Gen. B.* ii. p. 360 (1844).
Poospiza thoracica, *Cab. in Wiegm. Arch. f. Naturg.* 1847, p. 350; *Bp. Consp.* i. p. 472 (1850); *Cab. Mus. Hein.* Th. i. p. 137; *Licht. Nomencl. Av. Berol.* p. 43 (1854); *Sclater, Cat. Amer. B.* p. 109 (1862); *Pelz. Orn. Bras.* p. 229 note, et p. 439 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 36 (1873); *Salv. Cat. Strickl. Coll.* p. 226 (1882).
Paospiza thoracica, *Burm. Th. Bras.* iii. p. 217 (1856).
Passerina thoracica, *Gray, Hand-l. B.* ii. p. 98, no. 7462 (1870).

Adult. General colour above uniform ashy grey, slightly washed with olive-brown; lesser and median coverts bluish grey; greater coverts black, externally bluish grey; bastard-wing and primary-coverts black, edged with ashy; quills blackish, externally edged with ashy, the primaries with hoary white, broader near the base of the outer web, forming a kind of speculum; upper tail-coverts like the back; tail-feathers blackish, edged with ashy grey, with which the centre feathers are washed; crown of head rather more ashy grey than the back; lores dusky blackish; eyelid dusky; below the eye a white streak, followed by a blackish one; ear-coverts pale ashy; cheeks and throat white; lower throat, fore neck, and chest rich vinous chestnut; centre of breast and abdomen white; sides of body and flanks vinous-chestnut like the breast; thighs ashy; under tail-coverts light tawny buff; under wing-coverts and axillaries white; quills below blackish, the inner edge white: "bill horn-coloured brownish grey, the lower mandible paler; feet fleshy brownish grey; iris brown" (*Burmeister*). Total length 5·2 inches, culmen 0·45, wing 2·55, tail 2·5, tarsus 0·8.

Adult female. Only differs from the male in being browner, especially on the head; the chestnut on the lower parts much paler, and the band on the fore neck not so broad; a tinge of yellow on the throat and centre of breast. Total length 5·5 inches, culmen 0·5, wing 2·5, tail 2·5, tarsus 0·75.

Hab. Brazil.

a. Ad.; *b.* Juv. sk.	[Brazil.]	Gould Coll.
c, *d.* Ad.; *e.* Juv. sk.	Brazil.	M. Claussen.
f. Ad.; *g.* Juv. sk.	Brazil.	Sclater Coll.
h. Ad. sk.	Novo Fribourgo, Prov. of Rio de Janeiro (*J. Youds*).	Salvin-Godman Coll.
i. Ad. sk.	Rio de Janeiro.	Salvin-Godman Coll.

2. Poospiza boliviana. (Plate XIV.)

Adult. General colour above brown; lesser wing-coverts ashy grey; median and greater coverts dusky brown, edged with ashy grey and tipped with lighter ashy, hoary whitish on the greater

coverts; bastard-wing blackish, edged with ashy grey, whitish towards the tips; primary-coverts and quills dusky brown, edged with ashy, hoary on the primaries, browner on the secondaries; upper tail-coverts more ashy brown than the back; centre tail-feathers brown, the remainder blackish, the three outer ones with a white mark at the end of the inner web, more extended on the outermost, which is white along the outer web; crown of head brown, a little darker than the back, blackish on the base of the forehead, extending in a line above the eye; lores blackish, surmounted by a white eyebrow; eyelid white; ear-coverts dark ashy brown, with whitish shaft-lines; cheeks and entire throat white; sides of neck ashy grey; fore neck, sides of breast, and sides of body light vinous cinnamon; centre of breast and abdomen white; thighs white; under tail-coverts white, tinged with fulvous; under wing-coverts and axillaries white, with ashy bases; quills below dusky, ashy fulvous along the inner edge. Total length 6 inches, culmen 0·5, wing 3, tail 2·75, tarsus 0·85.

Hab. Bolivia.

a. Ad. sk.	Bolivia.	T. Bridges [C.]. (Type of species.)

3. Poospiza cæsar.

Poospiza cæsar, *Scl. & Salv. P. Z. S.* 1869, p. 152, pl. xiii.; *iid. Nomencl. Av. Neotr.* p. 30 (1873); *Scl. P. Z. S.* 1873, p. 780; *Taez. Orn. Pérou*, p. 32 (1886).

Passerina cæsar, *Gray, Hand-l. B.* ii. p. 99, no. 7476 (1870).

Adult female (type of species). General colour above dark slaty grey, with a brownish shade; lesser wing-coverts slaty grey; median and greater coverts blackish, externally slaty grey; bastard-wing, primary-coverts, and quills blackish, externally slaty grey, lighter on the primaries; upper tail-coverts dark slaty grey; tail-feathers blackish, edged with ashy grey; crown of head dark slaty grey, with a frontal band of black; lores black, surmounted by a narrow streak of white, continued into a broad white eyebrow; eyelid black, with a few white feathers below; ear-coverts black; cheeks and throat white; sides of neck slaty grey; fore neck and breast deep orange-chestnut; centre of breast and abdomen white; sides of breast, sides of body, and flanks dark slaty grey, as also the thighs; under tail-coverts chestnut; under wing-coverts and axillaries slaty grey, white on the inner lower coverts; quills below dusky, the inner edge ashy. Total length 7·3 inches, culmen 0·7, wing 3·3, tail 3·15, tarsus 1·1.

Adult male. Like the female in colour. Total length 7·6 inches, culmen 0·75, wing 3·5, tail 3·4, tarsus 1·1.

The pair described were obtained in January. One shot in September is apparently in winter plumage, being very much browner above, and having the chest pale rufous, obscured by sandy-buff edges to the feathers. This may be the plumage of the young bird after its first moult.

Hab. Peru.

a. ♂ ad. sk.	Tinta, Peru, Jan. 12, 1869.	H. Whitely [C.].
b. ♀ ad. sk.	Tinta, Jan. 12, 1869 (*H. Whitely*).	Sclater Coll. (Type of species.)
c. Jun. sk.	Tinta, May 20, 1868 (*H. Whitely*).	Sclater Coll.
d. ♂ ad. sk.	Tinta, May 12, 1868 (*H. Whitely*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Tinta, Jan. 17, 1869 (*H. Whitely*).	Salvin-Godman Coll.
f. Juv. sk.	Paucatambo, Peru, Sept. 15, 1872 (*H. Whitely*).	Salvin-Godman Coll.

4. Poospiza hypochondriaca.

Emberiza hypochondria, *d'Orb. & Lafr. Mag. de Zool.* 1837, p. 80; *d'Orb. Voy. Amér. Mérid., Zool.* p. 361, pl. xlv. fig. 1 (1835–44); *Burm. Th. Bras.* iii. p. 216 (1856).
Euspiza? hypochondria, *Gray, Gen. B.* ii. p. 376 (1844).
Poospiza hypochondriaca, *Bp. Consp.* i. p. 473 (1850); *Scl. & Salv. P. Z. S.* 1870, p. 605.
Passerina hypochondria, *Gray, Hand-l. B.* ii. p. 98, no. 7463 (1870).

Adult. General colour above brown, rather more ashy towards the rump; lesser wing-coverts dark ashy grey; median and greater coverts blackish, broadly edged with pale ashy fulvous; bastard-wing and primary-coverts blackish, edged with ashy, whitish at the ends of the former; quills blackish brown, edged with ashy, hoary on the primaries, the inner secondaries pale ashy fulvous like the greater coverts, paler on the margins; upper tail-coverts more ashy than the back: tail-feathers blackish, edged with ashy; the four outer tail-feathers with a white spot at the end of the inner web, increasing towards the outer feather, which is white for more than half the inner web and along the whole of the outer web, which is brownish towards the end; crown of head and hind neck dark ashy, blackish on the forehead, extending in a line above the eye; lores black, surmounted by a broad white eyebrow; upper and under edge of the eyelid, as well as a spot below the eye, white; ear-coverts dark ashy; feathers below the eye black; checks and throat yellowish white, separated by a malar line of blackish; fore neck and chest dark ashy grey; breast and abdomen ochreous white; sides of body and flanks chestnut; thighs ochreous white; under tail-coverts ochreous buff; under wing-coverts and axillaries white, with ashy bases; quills below dusky, ashy along the inner edge: "bill horn-colour; feet blackish; iris brown" (*d'Orbigny*). Total length 5·5 inches, culmen 0·55, wing 2·9, tail 2·6, tarsus 0·85.

Another bird is presumably a female. It is rather browner on the head, the grey band across the chest not so broad. Total length 5·2 inches, culmen 0·55, wing 3·1, tail 2·75, tarsus 0·85.

Hab. Bolivia.

a. [♂] ad. sk.	Tilotilo, Yungas, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
b. Ad. sk.	Bolivia.	W. Bridges, Esq. [C.].

5. Poospiza bonapartii.

Poospiza hispaniolensis, *Bp. Consp.* i. p. 473 (1850).
Poospiza bonapartii, *Scl. P. Z. S.* 1867, p. 341, pl. xx.; *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Taczan. P. Z. S.* 1877, p. 322; *id. Orn. Pérou*, iii. p. 31 (1886).
Passerina hispaniolensis, *Gray, Hand-l. B.* ii. p. 98, no. 7464 (1870).
Passerina bonapartii, *Gray, Hand-l. B.* ii. p. 99, no. 7475 (1870).
Poospiza torquata, *Tacz. P. Z. S.* 1874, p. 520.

Adult male (type of species). General colour above brown, mottled with darker brown centres to the feathers of the mantle and upper back; lower back and rump ashy grey, washed with brown; lesser wing-coverts ashy grey; median coverts blackish, tipped with ashy grey; greater coverts blackish, edged with ashy or brown and tipped broadly with white, forming a wing-band; bastard-wing blackish, externally edged with ashy whitish; primary-coverts dusky blackish, externally ashy; quills blackish, edged with ashy grey, hoary whitish towards the end of the primaries, and white at the base, forming a distinct speculum; the secondaries edged with brown; upper tail-coverts ashy grey; tail-feathers dark brown, edged with ashy grey, all but the centre feathers white on the inner web, decreasing somewhat towards the centre of the tail; crown of head and hind neck dark ashy grey; lores black, surmounted by a white eyebrow, which is bordered by a black line above; eyelid white above and below, black in front and behind like the ear-coverts and feathers below the eye, which are also black; cheeks white like the throat; sides of neck ashy grey; feathers of fore neck black, edged with ashy, forming a collar; sides of fore neck ashy grey; breast and abdomen white; sides of body and flanks pale ashy brown; thighs white; under tail-coverts white, with tawny bases; under wing-coverts and axillaries white, with ashy bases; quills below dusky, white along the inner edge. Total length 5 inches, culmen 0·5, wing 2·5, tail 1·8, tarsus 0·8.

Adult female. Differs from the male in being browner, the head like the back, slightly mottled with dusky centres; the lower back and rump rather more ashy; lesser wing-coverts ashy grey; median and greater coverts blackish, edged with ashy, pale tawny towards the ends of the feathers; bastard-wing dusky brown, edged with ashy, whitish towards the end; quills dusky brown, edged with reddish brown, more ashy on the primaries, hoary whitish towards the ends; tail-feathers brown, edged with lighter brown, the three outer feathers with a white spot at the end of the inner web, increasing towards the outermost; lores ashy; feathers below the eye and ear-coverts brown; a distinct white eyebrow; cheeks and throat white, with a few dusky spots on the sides of the lower throat, joining some blackish streaks which form an indistinct collar across the latter; breast and sides of the body pale ochreous brown, with dusky streaks; centre of breast, abdomen, and thighs white; under tail-coverts pale tawny, with white tips. Total length 4·6 inches, culmen 0·55, wing 2·45, tail 1·8, tarsus 0·8.

The male specimen described appears to be in seasonal plumage, as another male from San Carlos has no grey edges to the black pectoral collar; the head is ashy black, and the dark ashy on the sides of the breast extends down the sides of the body and is only slightly washed with brown.

Hab. Peru.

a, *b*. ♂ ♀ ad. sk.	Lima, Peru (*W. Nation*).	Sclater Coll. (Type of species.)
c. [♂] ad. sk.	"San Carlos." *	M. Verreaux.

6. Poospiza melanoleuca.

Chipiu negro y blanca, *Azara, Apunt.* i. p. 532 (1805); *Vieill. N. Dict. d'Hist. Nat.* xii. p. 4 (1817).

Emberiza melanoleuca, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 82; *Hartl. Ind. Azara*, p. 10 (1847).

Poospiza melanoleuca, *Bp. Consp.* i. p. 473 (1850); *Burm. La-Plata Reis.* ii. p. 484 (1861); *Pelz. Orn. Bras.* p. 439 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *iid. P. Z. S.* 1879, p. 605; *Salv. Ibis*, 1880, p. 354, pl. ix. fig. 2; *White, P. Z. S.* 1882, p. 599; *Salv. Cat. Strickl. Coll.* p. 227 (1882); *Barrows, Bull. Nutt. Orn. Club*, viii. p. 130 (1883).

Poospiza melanoleuca, *Burm. Th. Bras.* iii. p. 218, note (1856).

Passerina melanoleuca, *Gray, Hand-l. B.* ii. p. 99, no. 7469 (1870).

Adult male. General colour above slaty grey; lesser wing-coverts like the back; median and greater coverts blackish, externally slaty grey; bastard-wing, primary-coverts, and quills blackish, edged with slaty grey, rather paler on the inner secondaries, and more hoary grey on the primaries; upper tail-coverts a little darker slaty grey than the back; tail-feathers black, edged with slaty grey, slightly tipped with white, the penultimate one with a large wedge-shaped mark at the end of the inner web, the outer one white for the terminal half and along the outer web; crown of head, lores, feathers below the eye, and ear-coverts black; cheeks, throat, and under surface of body white, washed with creamy buff; sides of body and flanks pale ashy grey; thighs dark slaty grey; under tail-coverts white; under wing-coverts white, with a dusky spot near the outside of the wing; axillaries ashy grey; quills below dusky, ashy along the inner edge: "bill, legs, and feet black; iris light red" (*H. Durnford*), "iris reddish brown" (*E. W. White*). Total length 4·7 inches, culmen 0·45, wing 2·15, tail 2·1, tarsus 0·8.

Adult female. Similar to the male; "iris crimson" (*White*). Total length 4·6 inches, culmen 0·45, wing 2·15, tail 2·05, tarsus 0·75.

Young birds, as I take them to be, differ from the adults in wanting the black hood, the crown being dusky blackish or streaked with blackish. Some of them are washed with brown on the back.

Hab. Argentine Republic.

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* As usual, the original label has been taken off this specimen by Mr. G. R. Gray, and thus no clue to the collector can be obtained.

a. ♀ ad. sk.	Tucuman, June 1, 1878.	H. Durnford, Esq. [C.].
b. ♀ ad. sk.	Salta, Nov. 18, 1880 (*E. W. White*).	Sclater Coll.
c. ♀ ad. sk.	Cosquin, Cordova, Argentine Republic, July 3, 1882 (*E. W. White*).	Sclater Coll.
d. ♂ ad. sk.	Cosquin, Aug. 15, 1882 (*E. W. White*).	Sclater Coll.
e, f. ♂ ♀ imm. sk.	Cosquin, Aug. 17, 1882 (*E. W. White*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Fuerte de Andulgala, Catamarca, Argentine Republic, Aug. 29, 1880 (*E. W. White*).	Salvin-Godman Coll.

7. Poospiza cinerea.

Pyrgita cinerea, *Cuv. in Mus. Paris.*

Poospiza cinerea, *Bp. Consp.* i. p. 473 (1850); *Scl. Cat. Amer. B.* p. 110 (1862); *Pelz. Orn. Bras.* p. 439 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Salv. Cat. Strickl. Coll.* p. 227 (1882).

Poospiza schistacea, *Cab. Mus. Hein.* Th. i. p. 137 (1850); *Licht. Nomencl. Av. Neotr.* p. 43 (1854); *Pelz. Orn. Bras.* p. 229 (1871).

Poospiza schistacea, *Burm. Th. Bras.* iii. p. 218 (1856).

Poospiza cinerea, *Burm. Th. Bras.* iii. p. 218, note (1856).

Passerina cinerea, *Gray, Hand-l. B.* ii. p. 99, no. 7471 (1870).

Passerina schistacea, *Gray, Hand-l. B.* ii. p. 99, no. 7473 (1870).

Adult male. General colour above light ashy grey; lesser and median coverts like the back; greater coverts blackish, externally like the back; bastard-wing, primary-coverts, and quills black, externally edged with ashy grey, lighter on the primaries, broader on the secondaries; at the base of the primaries a slight shade of white, scarcely forming a speculum; upper tail-coverts like the back; tail-feathers blackish, edged with ashy grey; the outer feathers white excepting the black base to the inner web, the penultimate feather with a larger wedge-shaped mark at the end of the inner web, reduced on the third feather to a small spot; crown of head like the back; lores, feathers below the eye, eyelid, and ear-coverts blackish; cheeks and under surface of body white, with a yellowish tinge on the throat and fore neck and chest; the sides of the breast ashy grey; sides of body and flanks pale ashy brown; thighs ashy grey; under tail-coverts pale fawn-buff; under wing-coverts dull whitish, with dusky bases, those near the outside edge of the wing dusky; axillaries ashy grey like the sides of the breast; quills below dusky, ashy whitish along the inner edge: "bill greyish brown, whitish at the extreme base; feet greyish fleshy brown" (*Burmeister*). Total length 5·3 inches, culmen 0·5, wing 2·5, tail 2·5, tarsus 0·8.

Adult female. Similar to the male, but rather duller ashy grey. Total length 5 inches, culmen 0·45, wing 2·4, tail 2·2, tarsus 0·75.

Hab. Interior of Brazil.

a, *b*. ♂ ♀ ad. sk.	Goiaz, Brazil (*J. Natterer*).	Sclater Coll.
c. Ad. sk.	[Brazil.]	Salvin-Godman Coll.

8. Poospiza personata.

Chipiu negro y canela, *Azara, Apunt.* i. p. 527 (1802).

Pipillo personata, *Swains. An. in Menag.* p. 311 (1837); *Gould in Darwin's Voy. Beagle, Zool.* p. 98, pl. 35 (1841); *Gray, Gen. B.* ii. p. 360 (1844).

Emberiza personata, *d'Orb. & Lafr. Mag. de Zool.* 1837, p. 81; *Hartl. Ind. Azara*, p. 10 (1847).

Poospiza nigrorufa, *Cab. in Wiegm. Arch. f. Naturg.* 1847, p. 350; *Bp. Consp.* i. p. 473 (1850); *Burm. La-Plata Reis.* ii. p. 484 (1861); *Sclater, Cat. Amer. B.* p. 108 (1862); *Scl. & Salv. P. Z. S.* 1868, p. 140; *Hudson, P. Z. S.* 1870, p. 113; *Pelz. Orn. Bras.* p. 439 (1871); *Hudson, P. Z. S.* 1872, p. 508; *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Durnf. Ibis*, 1877, p. 171; *Barrows, Bull. Nutt. Orn. Club*, viii. p. 129 (1883); *Gibson, Ibis*, 1885, p. 277.

Poospiza mesoleuca, *Licht. Nomencl. Av. Berol.* p. 43 (1854); *Pelz. Orn. Bras.* p. 229, note (1871).

Poospiza nigrorufa, *Burm. Th. Bras.* iii. p. 216 (1856).

Passerina nigrorufa, *Gray, Hand-l. B.* ii. p. 98, no. 7461 (1870).

Adult male. General colour above blackish slate-colour; lesser wing-coverts like the back; median and greater coverts black, edged with slaty grey; bastard-wing, primary-coverts, and quills black, narrowly edged with slaty grey; upper tail-coverts like the back; tail-feathers black, the two outer ones with a spot of white at the end of the inner web, larger and extending to the outer web of the outermost tail-feather; crown of head deep black; lores white, surmounted by a narrow white eyebrow, which becomes chestnut above the ear-coverts; eyelid, feathers below the eye, and ear-coverts black; cheeks white, forming a distinct moustache, which extends on to the base of the chin; throat and under surface of body vinous chestnut; sides of neck slaty grey; abdomen white; sides of body and flanks dark slaty grey; thighs ashy grey; under tail-coverts pale rufous, the outer ones whitish; under wing-coverts and axillaries slaty blackish, edged with white; quills below blackish, ashy along the inner edge: "bill black, the under mandible white at the base; feet pale greyish fleshy brown; iris brown" (*Burmeister*). Total length 5·5 inches, culmen 0·45, wing 2·45, tail 2·35, tarsus 0·75.

This species seems to have a distinct *seasonal plumage*, when the adult male is browner above and the rufous of the underparts is less vivid.

The *young bird* is dusky brown above and striped below like a young Bunting. The throat is dull white, all the feathers being tipped with dusky; the fore neck, breast, and sides of body pale fulvous, streaked with dusky blackish, broader on the sides, flanks, and under tail-coverts; the abdomen dull whitish, with dusky shaft-streaks.

The *adult female* is duller black than the male and is slightly

washed with olive-brown above, the sides of the body and flanks being also similarly washed with brown; the vinous-chestnut colour of the underparts is also paler. Total length 5·5 inches, culmen 0·5, wing 2·45, tail 2·45, tarsus 0·7.

Hab. South-eastern Brazil, extending into Northern Patagonia.

a. ♂ ad. sk.	Maldonado (*C. Darwin*).	Zoological Society [P.].
b. ♂ ad. sk.	Belgrano, Buenos Ayres, March 27, 1876.	H. Durnford, Esq. [C.].
c. ♀ ad. sk.	Punta Lara, Buenos Ayres, Oct. 17, 1875.	H. Durnford, Esq. [C.].
d. Juv. sk.	Punta Lara, Feb. 2, 1876.	H. Durnford, Esq. [C.].
e. ♂ ad. sk.	Buenos Ayres, March 10, 1881 (*E. W. White*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Conchitas, Buenos Ayres, Nov. 1866 (*W. H. Hudson*).	Sclater Coll.
g. ♂ ad. sk.	Conchitas, Oct. 1860 (*W. H. Hudson*).	Sclater Coll.
h. ♀ juv. sk.	Conchitas (*W. H. Hudson*).	Sclater Coll.
i. ♀ ad. sk.	Rio Negro, Patagonia, Aug. 1871 (*W. H. Hudson*).	Salvin-Godman Coll.

9. Poospiza whitii.

Poospiza whitii, *Sclater, P. Z. S.* 1883, p. 43, pl. ix.

Adult male (type of species). General colour above dark slaty grey; lesser wing-coverts blackish, externally lighter slaty grey than the back; median and greater coverts blackish, margined externally with slaty grey like the back; bastard-wing black, narrowly fringed with slaty grey, with a small white spot at the ends; primary-coverts and quills black, externally edged with slaty grey, paler on the primaries; upper tail-coverts like the back; tail-feathers black, edged with slaty grey, the penultimate feather with a wedge-shaped spot at the end of the inner web, larger on the outer one, which has the outer web also white for its whole length; crown of head like the back, the forehead blackish, as well as a line above the eyebrow; lores black, surmounted by a broad white eyebrow, which extends from the base of the bill, and becomes chestnut above the ear-coverts; eyelid black, except where it touches the white eyebrow, where it is white; ear-coverts black; fore part of cheeks and chin white; hinder cheeks deep maroon like the throat, fore neck, and chest, extending down the sides of the breast; breast and abdomen pure white; sides of body and flanks slaty grey; thighs also ashy; under tail-coverts pale fawn-colour; under wing-coverts white with ashy bases; axillaries slaty grey, fringed with white; quills below dusky, ashy along the inner edge. Total length 5·5 inches, culmen 0·45, wing 2·6, tail 2·5, tarsus 0·75.

The *adult female* differs from the male in being duller in colour, the grey upper parts being washed with brown; the eyebrow is white, posteriorly tinged with buff; the rufous of the underparts is

of a paler maroon, not so deep as in the male, the feathers edged with sandy buff. Total length 5·3 inches, culmen 0·45, wing 2·3, tail 2·8, tarsus 0·75.

A young male, shot on the 7th of August, resembles the female in being browner above. The maroon of the underparts is not so rich as in the adults; the eyebrow is tinged with pale chestnut posteriorly. A *young female* has the eyebrow entirely dull white; the rufous of the underparts pale chestnut, not maroon, and the white spots on the outer tail-feathers smaller.

Hab. Argentine Republic.

a. ♂ ad. sk.	Cosquin, Cordova, Argentine Republic, July 6, 1882 (*E. W. White*).	Sclater Coll. (Type of species.)
b. ♂ ad. sk.	Cosquin, June 23, 1882 (*E. W. White*).	Sclater Coll.
c. ♀ ad. sk.	Cosquin, Aug. 15, 1882 (*E. W. White*).	Sclater Coll.
d, *e*. ♂ ad. sk.	Cosquin, Aug. 1882 (*E. W. White*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Cosquin, June 12, 1882 (*E. W. White*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Cosquin, Sept. 6, 1882 (*E. W. White*).	Salvin-Godman Coll.

10. Poospiza erythrophrys.

Poospiza erythrophrys, *Sclater, Ibis*, 1881, p. 599, pl. xvii. fig. 1; *White, P. Z. S.* 1882, p. 599.

Adult male (type of species). General colour above dull reddish brown washed with olive; lesser and median coverts bluish grey; greater coverts blackish, edged with ashy and broadly tipped with white, forming a wing-bar; bastard-wing and primary-coverts blackish, narrowly edged with ashy; quills blackish, margined with ashy, the primaries with hoary white, extending the whole length of the fourth and fifth, the inner secondaries washed with reddish brown externally; upper tail-coverts like the back; centre tail-feathers ashy grey; the remainder black, externally ashy grey, the outer feather white along the outer web, and for the terminal third of the inner one, the penultimate feather with a wedge-shaped mark of white at the end; crown of head dark ashy grey, contrasting with the back, and streaked with dusky blackish; lores and a broad eyebrow chestnut, as well as the eyelid; ear-coverts dark ashy grey like the sides of the neck; cheeks, throat, and under surface of body chestnut, becoming paler on the sides of the body, flanks, and under tail-coverts; the abdomen buffy whitish; thighs whitish; under wing-coverts and axillaries white; quills below dusky, white along the inner edge: "iris dark brown" (*White*). Total length 5·3 inches, culmen 0·5, wing 2·4, tail 2·4, tarsus 0·8.

Hab. Argentine Republic.

a. ♂ ad. sk.	Sierra de Totoral, Catamarca, Argentine Republic, July 30, 1880 (*E. W. White*).	Sclater Coll. (Type of species.)

11. Poospiza ornata.

Poospiza ornata, "*Landbeck*," *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873).

Adult male. General colour above dark chestnut-brown; lesser wing-coverts dark ashy grey; median coverts white, forming a wing-bar; greater coverts blackish, edged with ashy, white near the ends; bastard-wing, primary-coverts, and quills dusky, edged with ashy, whitish on the primaries; upper tail-coverts dark ashy grey; centre tail-feathers dark brown, the remainder blackish, edged with ashy, with a white spot at the end of the inner web, increasing in size towards the outermost; crown of head and hind neck dark ashy grey; lores dark ashy; eyebrow pale chestnut, bordered above by a blackish line along the sides of the crown; eyelid buffy white; ear-coverts and feathers below the eye dark ashy like the lores and sides of neck; below the eye a whitish spot; cheeks and under surface rich vinous chestnut; base of chin buffy whitish; abdomen paler and more cinnamon-rufous; sides of body and flanks deep maroon; thighs like the abdomen; under tail-coverts pale cinnamon; under wing-coverts and axillaries pale tawny buff; quills below dusky, ashy along the inner edge. Total length 5 inches, culmen 0·4, wing 2·5, tail 2·2, tarsus 0·65.

Adult female. Much paler everywhere than the male, the head and hind neck as well as the ear-coverts much lighter ashy than in the male; eyebrow reddish white; cheeks and under surface of body pale cinnamon-rufous, much lighter than in the male. Total length 5·5 inches, culmen 0·45, wing 2·5, tail 2·2, tarsus 0·65.

Hab. Western Argentine Republic and Mendoza.

a, b. ♂ ♀ ad. sk.	Mendoza (*Weisshaupt*).	Sclater Coll.
c, d. ♂ ♀ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.

12. Poospiza lateralis.

Montese obscuro y roxo, *Azara, Apunt.* i. p. 434, no. 116 (1802).
Fringilla lateralis, *Nordm. in Erman's Reise*, p. 10 (1835).
Pipillo superciliosa, *Swains. An. in Menag.* p. 311 (1837); *Gray, Gen. B.* ii. p. 360 (1844).
Tanagra pyrrhopyga, *Licht. MSS. in Mus. Berol.*
Poospiza lateralis, *Cab. Arch. f. Naturg.* 1847, p. 350; *Bp. Consp.* i. p. 473; *Licht. Nomencl. Av. Berol.* p. 43 (1854); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Barrows, Bull. Nutt. Orn. Club*, viii. p. 130 (1883).
Poospiza superciliosa, *Cab. Mus. Hein.* Th. i. p. 137 (1850); *Salv. Cat. Strickl. Coll.* p. 226 (1882).
Passerina lateralis, *Gray, Hand-l. B.* ii. p. 98, no. 7466 (1870).

Adult. General colour above ashy grey, washed with olive on the mantle and upper back; the lower back, rump, and upper tail-coverts bright chestnut; lesser wing-coverts dark slaty grey; median and greater coverts blackish, externally edged with slaty grey, the outer greater coverts rather broadly edged with white; bastard-wing, primary-coverts, and quills blackish, edged with

ashy, the outer primaries with greyish white, the fourth and fifth being bordered with white to the base, the inner secondaries externally reddish brown; tail-feathers blackish brown, edged with ashy, the three outer ones white at the end of the inner webs, increasing in extent towards the outermost, which has the outer web for the most part white; crown of head duller ashy than the back; the forehead blackish, extending in a line above the eye; lores dusky, surmounted by a white streak; feathers below the eye and ear-coverts dark slaty grey, with whitish shaft-lines; cheeks, throat, and fore neck fawn-buff; chest, centre of breast, and abdomen pure white; sides of breast, sides of body, and flanks deep rufous or chestnut; thighs dark ashy; under tail-coverts chestnut, a little paler than the flanks; under wing-coverts and axillaries white; quills below dusky, whitish along the inner edge: "bill blackish brown, paler on the lower mandible, but not quite white; feet fleshy brown; iris brown" (*Burmeister*). Total length 6 inches, culmen 0·55, wing 2·8, tail 3·6, tarsus 0·9.

Hab. South-eastern Brazil.

a. Ad. sk.	Brazil.	Purchased.
b. Ad. sk.	Brazil.	Zoological Society [P.].

13. Poospiza assimilis.

Poospiza assimilis, *Cab. Mus. Hein.* Th. i. p. 137, note (1850); *Burm. Th. Bras.* Th. iii. p. 216, note (1856); *Pelz. Orn. Bras.* p. 439 (1871); *White, P. Z. S.* 1882, p. 599.
Poospiza cabanisi, *Bp. Consp.* i. p. 473 (1850); *Burm. Th. Bras.* iii. p. 216 (1856).
Passerina assimilis, *Gray, Hand-l. B.* ii. p. 99, no. 7474 (1870).
Passerina cabanisi, *Gray, t. c.* p. 99, no. 7470 (1870).
Poospiza lateralis (*nec Nordm.*), *Pelz. Orn. Bras.* p. 229 (1871).

Adult male. General colour above ashy brown, gradually washed with rufous towards the rump and upper tail-coverts, which are entirely ferruginous; lesser wing-coverts dark slaty grey; median coverts the same, but slightly tinged with reddish brown; greater coverts dusky brown, edged with reddish brown, the outer ones with ashy, white towards the ends; bastard-wing and primary-coverts blackish, edged with ashy; quills dusky brown, edged with reddish brown, broader and more rufous on the inner secondaries, the primaries edged with ashy, hoary whitish towards the ends; tail-feathers blackish, the three outer ones tipped with white on the inner web, increasing towards the outermost; crown of head ashy brown like the mantle; lores dark ashy, surmounted by a white eyebrow; eyelid blackish; ear-coverts dark ashy, with whitish shaft-lines; cheeks and chin ashy whitish; lower throat and fore neck pale ashy grey; breast and abdomen white; sides of body and flanks cinnamon-rufous; thighs white; under tail-coverts pale tawny buff; under wing-coverts and axillaries whitish, with ashy bases, those near the edge of the wing dusky, forming a patch; quills

below dusky, ashy along the inner edge. Total length 5·2 inches, culmen 0·55, wing 2·5, tail 2·4, tarsus 0·85.

Hab. Argentine Republic.

a. ♂ ad. sk.	Concepcion, Misiones, Argentine Republic, June 27, 1881 (*E. W. White*).	Sclater Coll.

14. Poospiza torquata.

Emberiza torquata, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 82.

Poospiza torquata, *Bp. Consp.* i. p. 473 (1850); *Burm. Reise La-Plata St.* ii. p. 484 (1861); *Sclater, Cat. Amer. B.* p. 110 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *iid. P. Z. S.* 1879, p. 605; *White, P. Z. S.* 1882, p. 599; *Salvin, Cat. Strickl. Coll.* p. 227 (1882).

Passerina torquata, *Gray, Hand-l. B.* ii. p. 98, no. 7467 (1870).

Adult male. General colour above dark slaty grey; lesser wing-coverts like the back; median coverts black, tipped with ashy; greater coverts black, all but the inner ones broadly tipped with white, forming a wing-bar; bastard-wing and primary-coverts black; quills blackish, edged with ashy, the inner primaries externally margined with white; upper tail-coverts like the back; tail-feathers black, edged with ashy, the outer feather white along the outer web and across the terminal third of the inner one; the penultimate feather with a wedge-shaped spot of white at the end of the inner web, reduced to a small spot on the third feather; crown of head a little darker grey than the back, bordered by a line of black from the base of the bill to the sides of the nape; lores black; a broad eyebrow and the upper and under edge of the eyelid white; ear-coverts and feathers below the eye black like the lores, forming a broad band down the sides of the neck; cheeks and throat white; lower throat and fore neck black, the feathers edged with ashy; sides of fore neck and sides of breast ashy grey; centre of breast and abdomen white; sides of body and flanks paler ashy grey; thighs ashy; under tail-coverts chestnut; under wing-coverts white, with a dusky spot near the edge of the wing; axillaries ashy; quills below dusky blackish, ashy whitish along the inner edge. Total length 5·3 inches, culmen 0·4, wing 2·55, tail 2·2, tarsus 0·65.

Adult female. Similar to the male, but a little browner above; the sides of the body rather browner than in the male. Total length 5·0 inches, culmen 0·45, wing 2·4, tail 2·1, tarsus 0·65.

Hab. Eastern Argentine Republic, Mendoza, and Bolivia.

a, b. [♂ ♀ ad.] sk.	Bolivia.	Sclater Coll.
c. [♀] ad. sk.	Bolivia.	W. Bridges, Esq. [C.].
d. [♂] ad. sk.	Bolivia.	W. Bridges, Esq. [C.].
e, f. Ad. sk.	Tilotilo, Province of Yungas, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Mendoza, Feb. 1871 (*Weisshaupt*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.

68. JUNCO.

Type.

Junco, *Wagler, Isis*, 1831, p. 526 ..... J. cinereus.
Struthus, *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838, *nec Boie*) ..... J. hiemalis.
Niphæa, *Audub. Syn.* p. 106 (1839) ..... J. hiemalis.

Range. North America at large. Central America from Mexico to Guatemala.

Key to the Species.*

a. No chestnut on the wing-coverts or inner secondaries, these being externally brown or ashy.
  a'. No pinkish brown on the sides of the body.
    a''. General colour above ashy blackish; no white bars on the wing.
      a'''. Bill pinkish white or yellowish ..... *hiemalis*, p. 647.
      b'''. Bill horn-colour ..... *carolinensis*, p. 649.
    b''. General colour light ashy grey above; two wing-bars formed by the whitish tips to the wing-coverts ..... *aikeni*, p. 649.
  b'. Sides of body pinkish brown; back brown, more or less contrasting with the head.
    c''. Head black as well as the throat ..... *oregonus*, p. 650.
    d''. Head ashy; throat paler ashy.
      c'''. Head and hind neck clear ashy, contrasting with the brown back; bill yellow .. *annectens*, p. 651.
      d'''. Head and hind neck ashy brown, not strongly contrasting with the brown back; bill long, horn-coloured ..... *insularis*, p. 652. / *bairdi*, p. 653.
  c'. Sides of body ashy grey; mantle bright chestnut ..... *dorsalis*, p. 655.
  Greater coverts and inner secondaries externally chestnut; sides of body ashy or brown.
  d'. Three outer tail-feathers nearly or entirely white; back bright chestnut; bill entirely yellow ..... *caniceps*, p. 654.
  e'. White on two outer tail-feathers only.
    e''. Smaller; white on tail extending beyond the middle of the penultimate feather; the outer one almost entirely white†.
      e'''. Upper parts of head and neck with rump clear ashy grey; lores greyish black.... *palliatus*, p. 655.
    f''. Upper parts of head and neck with rump dark grey, inclining to slate-colour, the rump often tinged with olive; lores deep black ..... *cinereus*, p. 653.

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* Most of the species of *Junco* are granted only subspecific rank by American ornithologists, on account of their blending one into the other. Even such distinct species as *Junco hiemalis* and *J. oregonus* are said to merge, and the intermediate connecting link has been named *J. connectens* by Dr. Coues (Key N. Amer. B. 2nd ed. p. 378).

† The distribution of white on the tail is presumed to be the same in *J. palliatus* as in *J. cinereus*. I have not seen *J. palliatus*.

f''. Larger; the white on the outer tail-feathers confined to a wedge-shaped mark, which does not extend beyond the middle of the feather ..... *alticola*, p. 656.

1. Junco hiemalis.

The Snow Bird, *Catesby, Nat. Hist. Carol.* i. p. 36, pl. 36 (1731).
L'Ortolan de neige noir, *Briss. Orn.* iii. p. 289 (1760).
Emberiza hiemalis, *Linn. Syst. Nat.* i. p. 308 (1766); *Temm. Man. d'Orn.* iii. p. 234 (1835); *Werner, Atlas, Granivores*, pl. 38.
Fringilla hudsonia, *Forster, Phil. Trans.* lxii. p. 428 (1772); *Gm. Syst. Nat.* i. p. 926 (1788).
L'Ortolan Jacobin, *Montb. Hist. Nat. Ois.* iv. p. 335 (1778).
Black Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 166 (1783); *Penn. Arctic Zool.* ii. p. 359 (1785).
Fringilla nivalis (*nec Linn.*), *Wils. Amer. Orn.* ii. p. 129, pl. 16. fig. 6 (1810); *Nutt. Man.* p. 491 (1840).
Fringilla hiemalis, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 259 (1831); *Audub. B. Amer.* pl. xiii.; *id. Orn. Biogr.* i. p. 72 (1831), v. p. 505 (1839); *Jard. ed. Wils. Amer. Orn.* i. p. 272, pl. 16. fig. 6 (1832); *Gould, B. Eur.* iii. pl. 190 (1837); *Gray, Gen. B.* ii. p. 372 (1849); *Neuwied, J. f. O.* 1858, p. 277.
Struthus hiemalis, *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838); *id. Consp.* i. p. 475 (1850).
Niphæa hiemalis, *Audub. Syn.* p. 106 (1839); *id. B. Amer.* iii. p. 88, pl. 167 (1841); *Giraud, B. Long Isl.* p. 108 (1844); *Cab. Mus. Hein.* Th. i. p. 134 (1850).
Euspiza (Niphæa) hiemalis, *Blyth, Cat. B. Mus. As. Soc.* p. 130 (1849).
Niphæa hudsonia, *Licht. Nomencl. Av.* p. 43 (1854).
Junco hiemalis, *Scl. P. Z. S.* 1857, p. 7; *Baird, B. N. Amer.* p. 468 (1858); *Blakist. Ibis*, 1862, p. 6, 1863, p. 76; *Scl. Cat. Amer. B.* p. 115 (1862); *Dresser, Ibis*, 1865, p. 488; *Coues, Proc. Philad. Acad.* 1866, p. 85; *Baird, Ibis*, 1867, p. 270; *Dall & Bann. Trans. Chicago Acad.* i. p. 284 (1869); *Gray, Hand-l. B.* ii. p. 93, no. 7372 (1870); *Allen, Bull. Mus. Comp. Zool.* ii. p. 278 (1871); *Coues, Key N. Amer. B.* p. 141 (1872); *Ridgw. Amer. Nat.* vii. p. 613 (1873); *Baird, Brewer, & Ridgw. Hist N. Amer. B.* i. p. 580, pl. 26. fig. 5 (1874); *Coues, B. N.-West*, p. 141 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 266 (1875); *Coues, Bull. U.S. Geol. Surv.* iv. p. 593 (1878); *Maynard, B. Florida*, p. 93 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 170 (1881); *Salvin, Cat. Strickl. Coll.* p. 232 (1882); *Nelson, Cruise R. S. 'Corwin,'* p. 71 (1883); *Stearns, Proc. U.S. Nat. Mus.* vi. p. 117 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 377 (1884); *Brewster, Auk*, i. p. 15 (1884); *Merriam, Auk*, ii. p. 63 (1885); *Bicknell, t. c.* p. 146; *Agersb. t. c.* p. 281; *Murdoch, Exped. Pt. Barrow*, p. 107 (1885); *Turner, Proc. U.S. Nat. Mus.* viii. p. 240 (1885); *Brewst. Auk*, iii. pp. 98, 101, 278; *Rivers, t. c.* pp. 157, 160; *Batchelder, t. c.* p. 308; *Fox, t. c.* p. 318; *Seton, t. c.* p. 324; *A. O. U. Check-list N. Amer. B.* p. 274 (1886).

Adult male in breeding-plumage. General colour above ashy blackish, rather more distinctly ashy on the lower back and rump; lesser and median coverts ashy blackish; greater coverts, bastard-wing, and primary-coverts blackish, edged with ashy; quills blackish,

edged with ashy, decidedly clearer and more grey on the margins of the primaries; upper tail-coverts ashy black; tail-feathers blackish, edged with ashy, the two outer feathers white, the third one with a wedge-shaped mark of white on the inner web, with the basal part of the outer web also white; crown of head and hind neck rather blacker than the rest of the back; lores, sides of face, ear-coverts, cheeks, throat, sides of neck, and fore neck ashy blackish; remainder of under surface from the chest downwards white; sides of body, flanks, and thighs ashy blackish; under tail-coverts white; under wing-coverts blackish, the long ones tipped with white, forming a wing-bar; axillaries blackish; quills below blackish, ashy along the inner edge: "bill white, tinged with red, dark-coloured at tip; feet and legs flesh-coloured; iris blackish brown" (*Audubon*). Total length 6 inches, culmen 0·45, wing 3·15, tail 2·5, tarsus 0·8.

Adult female in breeding-plumage. Lighter ashy than the male, tending to ashy blackish on the head and hind neck; the penultimate tail-feather with a small brown edging to the end of the outer web, and the white on the third feather reduced to an irregular mark on the inner web. Total length 6 inches, culmen 0·45, wing 3·1, tail 2·35, tarsus 0·75.

Adult male in winter plumage. More ashy than in summer, and overshaded with brown; wing-coverts edged at the ends with pale ashy; secondaries also washed with brown or ashy brown externally; the white on the outer tail-feathers as in the old female, but a little more developed on the third feather; axillaries white, with blackish bases; wing-coverts white, excepting a blackish patch near the outer edge of the wing.

The darkening of the axillaries and under wing-coverts of the male in summer is a curious phenomenon in this species, the white tips either being much reduced in extent or disappearing altogether.

The *adult female in winter plumage* is altogether browner than in the summer plumage, the grey colouring being entirely obscured by rusty brown, which is very pronounced on the inner secondaries; there is also a slight yellowish tinge on the white abdomen.

Young before the first moult. Entirely streaked or spotted like most very young Sparrows. Upper parts streaked with blackish and rusty brown, the secondaries and wing-coverts conspicuously edged with the latter. Upper parts streaked or speckled with dusky and ochry brown on all the fore part and sides; the belly and crissum soiled whitish; bill dusky, paler below. (*E. Coues.*)

The *young after the first moult* resemble the winter plumage of the adult female.

Hab. North America at large, but chiefly east of the Rocky Mountains, breeding from the higher parts of the Alleghanies and northern New York and northern New England northwards. South in winter to the Gulf States. (*A. O. U. Check-list, l. c.*)

a. Ad. st.	N. America.	Purchased.
b. [♀] ad. sk.	N. America.	Sclater Coll.
c, d. Ad sk.	Repulse Bay.	Dr. Rae [P.].

e,f. ♂; *g, h.* ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
i, k, l. Ad. sk.	49th Parallel, April (*G. Dawson*).	N.A. Boundary Com. [P.].
m, n. ♂ ad. sk.	Illinois, April (*H. K. Coale*).	R. B. Sharpe, Esq.
o. Ad. sk.	Illinois.	R. B. Sharpe, Esq.
p. ♀ ad. sk.	Chicago, Illinois, Oct. 29, 1877 (*H. K. Coale*).	R. B. Sharpe, Esq.
q. ♀ ad. sk.	New York (*Hurst*).	Sclater Coll.
r. ♂ ad. sk.	Pembroke, New Hampshire, Oct. 28, 1882.	R. B. Sharpe, Esq. [P.].
s. ♀ ad. sk.	Across Eastern Branch, Maryland, April 13, 1860 (*E. Coues*; Sm. no. 29036).	Salvin-Godman Coll.
t. ♂ ad. sk.	Maryland, Feb. 28, 1861 (*E. Coues*; Sm. no. 29033).	Salvin-Godman Coll.
u, v. ♂ ♀ ad. sk.	District of Columbia (*C. Drexler*; Sm. nos. 28446, 28458).	U.S. Nat. Mus. [P.].
w. Ad. sk.	District of Columbia (*C. Drexler*; Sm. no. 28460).	Salvin-Godman Coll.
x. Ad. sk.	District of Columbia, Jan. 13, 1871 (*R. Ridgway*).	Salvin-Godman Coll.

Subsp. *a.* Junco carolinensis.

Junco hiemalis carolinensis, *Brewst. Auk*, iii. p. 108 (1886); *Batchelder, t. c.* p. 311.

Adult male. Middle of breast behind and of the belly, under tail-coverts, and outer three tail-feathers white, the third feather with a narrow inner edging of slate-colour; remainder of plumage deep bluish or ashy plumbeous, the crown and back concolor, the throat a shade lighter; no blackish anywhere except on the wings and tail, the feathers of which are nearly, if not quite, black, with greyish plumbeous outer edging: bill (in the dried specimens) dark horn-colour. Wing 3·20, tail 2·70, bill 0·51. (*Brewster, l. c.*)

Adult female. Smaller than the male, and generally lighter coloured, with a tinge of brownish above. Wing 2·98, tail 2·67. (*Brewster, l. c.*)

Hab. Mountains of Western North Carolina.

2. Junco aikeni.

Junco hiemalis, var. aikeni, *Ridgw. in Aiken, Proc. Bost. Soc. N. H.* xv. p. 201 (1872); *id. Amer. Nat.* vii. p. 613 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 584, pl. 26. fig. 6 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 266 (1875).

Junco hiemalis aikeni, *Coues, Check-list N. Amer. B.* p. 55 (1882); *id. Key N. Amer. B.* 2nd ed. p. 378 (1884).

Junco aikeni, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 179, 217 (1881); *Drew, Auk*, ii. p. 16 (1885); *Cooke, t. c.* p. 32; *A. O. U. Check-list N. Amer. B.* p. 274 (1886).

Adult female. Similar to the same sex of *J. hiemalis*, but larger, paler ashy grey, and distinguished by the white ends to the median and greater coverts, the inner secondaries also externally white. Total length 6·5 inches, culmen 0·55, wing 3·4, tail 2·5, tarsus 0·8.

The three outer tail-feathers are white, and the fourth has a mark of white on the inner web.

Hab. Colorado, north to the Black Hills, where it breeds (*A. O. U. Check-list, l. c.*).

a. ♀ ad. sk. El Paso county, Colorado, Feb. 24, 1874 (*C. E. Aiken*). R. B. Sharpe, Esq. [P.].

3. Junco oregonus.

Fringilla oregona, *Towns. Proc. Philad. Acad.* vii. p. 188 (1837); *Audub. B. Amer.* pl. 398; *id. Orn. Biogr.* v. p. 68 (1839); *Gray, Gen. B.* ii. p. 372 (1849).

Struthus oregonus, *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838); *id. Consp.* i. p. 475 (1850); *Woodh. in Sitgr. Rep. Zuni & Color. R.* p. 83 (1854).

Niphæa oregona, *Aud. Syn.* p. 107 (1839); *id. B. Amer.* iii. p. 91, pl. 168 (1841); *Cab. Mus. Hein.* Th. i. p. 134 (1850).

Fringilla hudsonia (*nec Forst.*), *Licht. Abhandl. k. Akad. Berlin*, 1839, p. 424.

Fringilla atrata, *Brandt, Icon. Rosso-Asiat.* pl. 2. fig. 8.

Junco oregonus, *Sclater, P. Z. S.* 1857, p. 7; *Baird, B. N. Amer.* p. 466 (1858); *Scl. Cat. Amer. B.* p. 115 (1862); *Blakist. Ibis*, 1863, p. 76; *Coues, Proc. Philad. Acad.* p. 85 (1866); *Baird, Ibis*, 1867, p. 270; *Brown, Ibis*, 1868, p. 422; *Dall & Bann. Trans. Chicago Acad.* i. p. 284 (1869); *Cooper, B. Calif.* p. 199 (1870); *Gray, Hand-l. B.* ii. p. 93, no. 7369 (1870); *Finsch, Abhandl. nat. Ver. Bremen*, 1872, p. 53; *Allen, Bull. Mus. Comp. Zool.* iii. pp. 118, 167, 177 (1872); *Coues, Key N. Amer. B.* p. 141 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 584, pl. 26. fig. 2 (1874); *Coues, B. N.-West*, p. 142 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 267 (1875); *Belding, Proc. U.S. Nat. Mus.* i. p. 416 (1879); *Cooper, op. cit.* ii. p. 248 (1880); *Ridgw. op. cit.* iii. p. 179 (1881); *Salvin, Cat. Strickl. Coll.* p. 232 (1882); *Bean, Proc. U.S. Nat. Mus.* v. p. 152 (1882); *Drew, Auk*, ii. p. 16 (1885); *Batchelder, t. c.* p. 123; *Beckh. t. c.* p. 141; *Scott, t. c.* p. 174; *Hensh. Auk*, iii. p. 74 (1886).

Junco hiemalis, var. oregonus, *Ridgw. Amer. Nat.* vii. p. 613 (1873).

Junco hemalis oregonus, *Coues, Check-l. N. Amer. B.* p. 56 (1882); *id. Key N. Amer. B.* 2nd ed. p. 378 (1884); *A. O. U. Check-list N. Amer. B.* p. 274 (1886); *Anthony, Auk*, iii. p. 169 (1886); *Everm. t. c.* p. 182; *Seton, t. c.* p. 324.

Adult male. General colour above rufous chocolate-brown, the lower back, rump, and upper tail-coverts dull ashy; lesser wing-coverts dark ashy grey; median and greater coverts dusky or blackish brown, edged with lighter brown, paler at the ends; bastard-wing, primary-coverts, and quills blackish, edged with ashy, inclining to white on the first primary, the secondaries externally rufous-brown, paler at the end of the outer web; tail-feathers dark ashy blackish, the two outer ones entirely white, excepting the extreme base, which is blackish; the third feather with a longitudinal wedge-shaped mark of white on the inner web; crown of head black, abruptly defined on the hind neck; lores, sides of face, ear-coverts, cheeks, throat, sides of neck, and fore neck black, sharply defined on the latter; chest and remainder of under surface white;

sides of body and flanks dull pinkish brown; thighs white, with ashy bases; under tail-coverts white; under wing-coverts and axillaries ashy, the latter edged with whitish, and the wing-coverts broadly tipped with white; quills below dusky, ashy along the inner edge: "bill reddish white, the tip dusky; feet and claws flesh-colour; iris hazel" (*Audubon*). Total length 5·7 inches, culmen 0·35, wing 3, tail 2·55, tarsus 0·8.

Adult female. Similar to the male, but rather browner. Total length 5·8 inches, culmen 0·45, wing 3·15, tail 2·6, tarsus 0·8.

The changes of plumage in this species are similar to those undergone by *J. hiemalis*, according to Dr. Coues.

Hab. Western United States, northward to Alaska, east to the Plains, south in winter to New Mexico, Arizona, and South California. Accidentally in Michigan and Massachusetts. (*A. O. U. Check-list, l. c.*)

a. Ad. st.	"Kamtschatka."	Mr. Brandt.
b. [♀ imm.] sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
c. Ad. sk.	Vancouver Island.	Dr. Lyall [P.].
d, e. ad. sk.	S. Juan Island.	Dr. Lyall [P.].
f, g. ♂, *h*. ♀ ad.; *i*. Imm. sk.	British Columbia.	J. K. Lord, Esq. [P.].
k, l. ♂ ♀ ad. sk.	Cascade Mountains.	J. K. Lord, Esq. [P.].
m. ♂ ad. sk.	Fort Bridger, Utah, April 15, 1858 (*C. Drexler*; Sm. no. 11171).	Salvin-Godman Coll.
n. ♀ ad. sk.	Fort Klamath, Oregon, Nov. 5, 1882 (*C. Bendire*; Sm. no. 94824).	U.S. Nat. Mus. [P.].
o. Ad. sk.	California.	Sclater Coll.
p. ♀ ad. sk.	California (*Heerman*; Sm. no. 3921).	Salvin-Godman Coll.
q, r, s, t, u. Ad. sk.	California.	Lord Walsingham [P.].
v. ♂ ad. sk.	San Bernardino, California, Jan. 9, 1883 (*R. B. Hetton*).	R. B. Sharpe, Esq. [P.].
w. ♂ ad. sk.	Walker's Basin, California, Nov. 5, 1875 (*H. W. Henshaw*; Sm. no. 72196).	Salvin-Godman Coll.
x. ♂ ad. sk.	N. California, Nov. 16, 1883 (*C. H. Townsend*; Sm. no. 95097).	U.S. Nat. Mus. [P.].
y. Ad. sk.	Nevada, California, Oct. 1872 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
z. ♂ ad. sk.	Bear Valley, California, Feb. 6, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
a'. ♀ ad. sk.	Fort Tejon, California (*J Xantus*; Sm. no. 10268).	U.S. Nat. Mus. [P.].

4. Junco annectens.

Junco annectens, *Baird, in Cooper's B. Calif.* p. 564 (1870); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Drew, Auk*, ii. p. 16 (1885); *Batchelder, t. c.* p. 306; *Hensh. Auk*, iii. p. 74 (1886); *A. O. U. Check-list N. Amer. B.* p. 275 (1886).

Junco oregonus (*nec Towns.*), *Merriam, Bull. U.S. Geol. Surv.* 872, p. 687.

Junco oregonus, var. annectens, *Hensh. Rep. Orn. Spec. Wheeler's Exped.* p. 115 (1874); *id. Rep. Zool. Expl.* 100*th Merid.* p. 268, pl. viii. (1875).

Junco cinereus, var. caniceps (pt.), *Coues, B. N.-West*, p. 143 (1874).

Junco hiemalis annectens, *Coues, Check-list N. Amer. B.* p. 6 (1882); *id. Key N. Amer. B.* 2nd ed. 379 (1884).

Adult. General colour above palo earthy brown, more ashy on the scapulars; lower back and rump paler slaty grey; lesser wing-coverts slaty grey; median and greater coverts dusky, with slaty-grey edges, paler on the latter series, the innermost of which are externally brown; bastard-wing and primary-coverts blackish; quills blackish, edged with ashy, browner on the inner secondaries; the primaries margined with hoary grey; upper tail-coverts slaty grey; tail-feathers dusky brown, edged with ashy, the two outer ones almost entirely white; crown of head and hind neck light slaty grey; lores and feathers round the eye blackish; sides of face, ear-coverts, cheeks, throat, and fore neck light slaty grey; breast and abdomen white; sides of body and flanks pinkish brown; thighs ashy; under tail-coverts white, with dusky centres; under wing-coverts and axillaries slaty grey, the latter edged with whitish; quills below dusky, ashy along the inner edge. Total length 5·8 inches, culmen 0·45, wing 3·1, tail 2·65, tarsus 0·75.

Hab. Rocky-Mountain region, from Arizona and New Mexico [in winter], north to Idaho and Montana (*A. O. U. Check-list, l. c.*).

a. Ad. sk. [N. America.] Salvin-Godman Coll.

5. Junco insularis.

Junco insularis, *Ridgw. Bull. U.S. Geol. Surv.* ii. p. 188 (1876); *id. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *A. O. U. Check-l. N. Amer. B.* p. 276 (1886).

Adult female. General colour above uniform chocolate-brown; rump and upper tail-coverts more ashy grey; lesser and median coverts dull slaty grey, the latter with faint paler tips; greater coverts dusky brown, edged with ashy brown, slightly paler at the ends; bastard-wing, primary-coverts, and quills dusky brown, margined with ashy, browner on the secondaries; tail-feathers dusky brown and edged with ashy, the two outer ones for the most part white, with an oblique basal mark of blackish on the inner web, the outer web fringed with blackish near the end, these characters more pronounced on the penultimate feather, the third with an irregular patch near the end of the inner web; crown of head dark slaty grey, washed with brown; lores and feathers round the eye blackish; ear-coverts and sides of face dark slaty grey; cheeks, throat, and fore neck lighter slaty grey; centre of breast and abdomen ashy whitish; sides of body and flanks dull pinkish brown; thighs dark ashy grey; under tail-coverts white, the long ones with dusky centres; under wing-coverts and axillaries dull ashy grey; quills below dusky, ashy along the inner edge. Total length 5·5 inches, culmen 0·55, wing 2·5, tail 2·15, tarsus 0·8.

Hab. Island of Guadelupe, Lower California.

a. ♀ ad. sk. Guadelupe Island (*E. Palmer*; Sm. no. 70021). Salvin-Godman Coll.

6. Junco bairdi.

Junco bairdi, *Ridgway, Proc. U.S. Nat. Mus.* vi. p. 155 (1883, *ex Belding, MSS.*); *Belding, t. c.* p. 348; *A. O. U. Check-list N. Amer. B.* p. 276 (1886).

Adult. Head and neck ash-grey, gradually lightening into very pale ashy on the throat; the occiput and nape somewhat tinged with brown; lores blackish, in distinct contrast; back, scapulars, upper (or inner) greater wing-coverts, and tertials dull light rufous brown, somewhat tinged with olive; rump and upper tail-coverts greyish olive, or light greyish brown, as are also the lesser, middle, and lower (outer) greater wing-coverts; primaries more grey, edged with paler, the outermost white on the margin; inner webs of tertials dusky; tail dusky greyish olive-brown, the exterior feather chiefly white, the next with nearly the terminal half white next the shaft, the third with or without a small terminal white spot; jugulum very pale buffy greyish, in rather abrupt, though not pronounced, contrast with the white of the abdomen; entire sides and flanks deep cinnamon-buff; crissum dull white; maxilla dark brown (not black); mandible "bright yellow;" iris "colour of ripe oranges" or "bright yellow;" legs and feet pale brown in the dried skin. Wing 2·75–2·8, tail 2·70–2·80, culmen 0·40–0·41, depth of bill through base 0·25, tarsus 0·80, middle toe 0·51–0·55. (*Ridgway.*)

Hab. Lower California.

7. Junco cinereus.

Fringilla cinerea, *Swains. Phil. Mag.* new ser. i. p. 435 (1827); *Gray, Gen. B.* ii. p. 372 (1849).

Junco phæonotus, *Wagler, Isis*, 1831, p. 526.

Junco cinereus, *Bp. Consp.* i. p. 486 (1850); *Cab. Mus. Hein.* Th. i. p. 134 note (1850); *Scl. P. Z. S.* 1856, p. 306, 1858, p. 304, 1859, p. 365; *Baird, B. N. Amer.* p. 465 (1858); *Scl. Cat. Amer. B.* p. 115 (1862); *id. P. Z. S.* 1864, p. 174; *Dugès, La Nat.* i. p. 140 (1868); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869); *Gray, Hand-l. B.* ii. p. 93, no. 7368 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 271, pl. x. (1875); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 180 (1881); *Salvin, Cat. Strickl. Coll.* p. 232 (1882); *Scott, Auk*, ii. p. 174 (1885); *Brewster, t. c.* p. 198; *Ridgw. t. c.* p. 363 (1885); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 373 (1886).

Adult male. General colour above bright chestnut or bay on the interscapulary region, upper back, and scapulars; lower back, rump, and upper tail-coverts ashy grey; lesser and median coverts ashy grey, or grey with blackish bases; greater coverts the same as the median coverts, the inner ones bright bay externally, ashy on the inner web; bastard-wing, primary-coverts, and quills blackish, externally edged with ashy grey, more hoary on the margins of the primaries, the inner secondaries externally bright chestnut; tail-feathers blackish, edged with ashy, the penultimate feather with a

long wedge-shaped mark of white on the inner web, the outermost feather almost entirely white, except an oblique blackish mark at the base of the inner web, and a blackish edging to the end of the outer web; crown of head and hind neck ashy grey; lores and feathers round eye blackish; extreme base of chin dusky; sides of face, ear-coverts, and sides of neck dark ashy grey; cheeks, throat, and fore neck lighter ashy, shading off paler on the breast towards the abdomen, which is whitish; sides of body and flanks light ashy; thighs ashy; under tail-coverts white with ashy bases; under wing-coverts and axillaries light ashy, the median wing-coverts white at the ends; quills below dusky, ashy isabelline along the inner edge. Total length 5·8 inches, culmen 0·45, wing 3·1, tail 2·85, tarsus 0·8.

Adult female. Similar to the male. Total length 5·8 inches, culmen 0·5, wing 3·1, tail 2·75, tarsus 0·8.

The *winter plumage of the adults* only differs from the breeding-plumage in being shaded with brown, with which all the feathers are edged.

Young. Recalls the colour of the adults, but is everywhere spotted with triangular black markings at the end of the feathers, both above and below; the wing-coverts and inner secondaries are edged with pale fulvous at the end.

Hab. Eastern mountain-districts of Mexico (from the Sierra Madre of Chihuahua to the high districts of Vera Cruz) (*teste Ridgway, l. c.*).

a. Ad. sk.	Mexico.	Salvin-Godman Coll.
b. Ad. sk.	Mexico.	Purchased.
c. Ad. sk.	Mexico.	J. Gould, Esq.
d, e. ♂ ♀ ad. sk.	Ciudad Durango, June 17 (*A. Forrer*).	Salvin-Godman Coll.
f. Juv. sk.	Ciudad Durango, July 4 (*A. Forrer*).	Salvin-Godman Coll.
g. Ad. sk.	Jalapa (*De Oca*).	Salvin-Godman Coll.
h. ♀ juv. sk.	Jalapa (*De Oca*).	Sclater Coll.
i. ♂ ad. sk.	Popocatepetl (*De Saussure*).	Sclater Coll.
k. ♂ ad. sk.	S. Mexico.	A. Sallé [C.].

8. Junco caniceps.

Struthus caniceps, *Woodh. Proc. Philad. Acad.* 1852, p. 202; *id. in Sitgr. Rep. Zuni & Color. R.* p. 83, pl. 3 (1853).

Junco caniceps, *Baird, B. N. Amer.* p. 468, pl. 72. fig. 1 (1858); *Coues, Proc. Philad. Acad.* 1866, p. 85; *Cooper, B. Calif.* p. 201 (1870); *Gray, Hand-l. B.* ii. p. 93, no. 7370 (1870); *Allen, Bull. Mus. Comp. Zool.* iii. p. 177 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 587, pl. 26. fig. 3 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 179 (1881); *Drew, Auk*, ii. p. 16 (1885); *Batchelder, t. c.* p. 123; *Beckh. t. c.* p. 141; *Hensh. Auk*, iii. p. 74 (1886); *A. O. U. Check-list N. Amer. B.* p. 275 (1886).

Junco cinereus, var. caniceps, *Coues, Key N. Amer. B.* p. 141 (1872); *id. B. N.-West*, p. 143 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 269 (1875).

Junco hiemalis, var. caniceps, *Ridgw. Amer. Nat.* vii. p. 613 (1873).

Junco hiemalis caniceps, *Coues, Check-list N. Amer. B.* p. 56 (1882); *id. Key N. Amer. B.* 2nd ed. p. 379 (1884).
Junco cinereus caniceps, *Scott, Auk*, ii. p. 174 (1885).

Adult male. Very similar to *J. cinereus*, but easily distinguished by the brighter bay of the mantle, the greater extent of white on the breast and abdomen, by the absence of chestnut on the scapulars and wing-coverts, all of which are grey, and by the greater amount of white on the tail, the two outer feathers of which are almost entirely white. Total length 5·7 inches, culmen 0·45, wing 3·2, tail 2·6, tarsus 0·8.

Hab. Rocky-Mountain region from the Black Hills to the Wahsatch and Uinta mountains, south to New Mexico and Arizona (*A. O. U. Check-list, l. c.*).

a. ♂ ad. sk.	Cantonment Burgwin, New Mexico (*W. W. Anderson*).	R. B. Sharpe, Esq. [P.].
b. Ad. sk.	South Park, Aug. 1867 (*Prof. Powell*; Sm. no. 51631).	Salvin-Godman Coll.
c. Ad. sk.	Rocky Mountains, Aug. 20, 1874 (*Dr. E. Coues*; Sm. no. 72993).	U. S. Nat. Mus. [P.].

9. Junco palliatus.

Junco cinereus palliatus, *Ridgw. Auk*, ii. p. 364 (1885); *A. O. U. Check-list N. Amer. B.* p. 275 (1886).

Adult. Outer web of tertials and some of the wing-coverts rufous; upper parts of head and neck, with rump, clear ash-grey; lores greyish black (*Ridgway*).

Hab. Mountains of Central and Southern Arizona (*Ridgway*).

10. Junco dorsalis.

Junco dorsalis, *Henry, Proc. Philad. Acad.* 1858, p. 117; *Baird, B. N. Amer.* p. 467, pl. 28. fig. 11 (1858); *Gray, Hand-l. B.* ii. p. 93, no. 7371 (1870); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 179 (1881).
Junco cinereus, var. caniceps (pt.), *Coues, B. N.-West*, p. 143 (1874).
Junco hiemalis dorsalis, *Hensh. Rep. Orn. Spec. Wheeler's Exped.* p. 115 (1874); *Coues, Check-l. N. Amer. B.* p. 56 (1882); *id. Key N. Amer. B.* 2nd ed. p. 379 (1884).
Junco cinereus, var. dorsalis, *Hensh. Rep. Zool. Expl. 100th Merid.* p. 270, pl. ix. (1875).
Junco cinereus dorsalis, *Ridgway, Proc. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-list N. Amer. B.* p. 275 (1886); *Ridgw. Auk*, iii. p. 364 (1886).

Adult. General colour above dark ashy grey, the mantle and centre of the back chestnut; scapulars, lower back, rump, and upper tail-coverts dark ashy grey, somewhat shaded with brown; lesser wing-coverts dark ashy grey; median and greater coverts brown, edged with ashy; bastard-wing, primary-coverts, and quills dusky brown, margined with ashy, horny whitish on the primaries; tail-

feathers blackish brown, edged with ashy; outer feather white, penultimate one white, excepting a brown edging to the end of the outer web, the third one with a long wedge-shaped mark of white along the inner web; crown of head and hind neck dark ashy grey; lores and eyelid blackish; ear-coverts, sides of face, and under surface of the body ashy grey, becoming paler and more ashy whitish on the lower breast and abdomen; sides of body and flanks pale ashy; thighs ashy; under tail-coverts white; under wing-coverts and axillaries pale ashy, with whitish edges; quills below dusky, ashy whitish along the inner edge: "bill brownish black above, below whitish; legs and feet brown; iris hazel" (*Henshaw*). Total length 5·6 inches, culmen 0·5, wing 3·25, tail 2·7, tarsus 0·8.

Hab. Mountains of New Mexico and Eastern Arizona (*Ridgway, l. c.*).

a. Ad. sk. Fort Bridger, Utah, July 1872 (*E. W. Nelson*). R. B. Sharpe, Esq. [P.].

11. Junco alticola.

Junco alticola, *Salvin, P. Z. S.* 1863, p. 189; *id. Ibis*, 1866, p. 193; *Gray, Hand-l. B.* ii. p. 93, no. 7373 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Salvin & Godm. Biol. Centr.-Amer., Aves*, i. p. 374, tab. xxvi. fig. 1 (1886).

Junco hiemalis, var. alticola, *Ridgw. Amer. Nat.* vii. p. 613 (1873).

unco cinereus, var. alticola, *Ridgw. in Baird, Brewer, & Ridgw. Hist. N. Amer. B.* p. 580 (1874).

Adult (type of species). General colour above dull rufous-brown, the lower back, rump, and upper tail-coverts more earthy brown, as also the scapulars; lesser and median coverts dark ashy, the latter washed with brown; greater coverts dark chestnut; bastard-wing, primary-coverts, and quills blackish brown, edged with ashy, more hoary on the outer primaries, browner on the secondaries, the innermost of which are externally chestnut; tail-feathers blackish, edged with brown, the two outer ones with a large wedge-shaped mark of white, more extended on the outer feather; crown of head and hind neck dark slaty grey; lores and feathers round eye blackish; sides of face, ear-coverts, as well as the sides of neck, dark slaty grey; cheeks, throat, and breast ashy grey, becoming paler on the latter, gradually towards the abdomen, which is whitish; sides of body and flanks brown; thighs dark slaty grey; under tail-coverts pale sandy buff, with dull ashy centres; under wing-coverts and axillaries ashy, with whitish edges; near the edge of the wing a dusky patch; quills below dusky, ashy isabelline along the inner edge. Total length 6·3 inches, culmen 0·55, wing 3·15, tail 2·75, tarsus 0·95.

The sexes are alike in colour, and of about the same size. A male and female both have the wing 3·05 inches.

Young. Similar to the adults, but with all the colours duller above and paler below, the feathers closely mottled with triangular blackish spots at the ends.

Hab. Mountains of Guatemala.

a. Ad.; *b*. ♀ ad. sk.	Pine Forests, Volcan de Fuego, Nov. 1861 (*O. S.*).	Salvin-Godman Coll. (Types of the species.)
c. Juv. sk.	Totonicapan, Sept. 1862 (*O. S.*).	Salvin-Godman Coll.
d, *e*. ♂ ♀ ad. sk.	Pine Forests, Volcan de Fuego, Nov. 18, 1873 (*O. S.*).	Salvin-Godman Coll.
f, *g*. ♂ ♀ ad. sk.	Pine Forests, Volcan de Fuego, Nov. 18, 1873 (*O. S.*).	Sclater Coll.
h. Ad. sk.	Quezaltenango, Aug. 1862 (*O. S.*).	Sclater Coll.

69. SPIZELLA.

Type.

Spizella, *Bp. Saggio distr. Met.* p. 140 (1832) ..... S. pusilla.
Spinites, *Cab. Mus. Hein.* Th. i. p. 133 (1850) ..... S. socialis.

Range. North America generally, extending as far as Guatemala in Central America.

Key to the Species.

a. Crown of head uniform or rufous.
  a'. Bill black or black and yellow, not reddish.
    a''. Larger: no black on the forehead; a black spot in the centre of the chest ..... *monticola*, p. 657. / *ochracea*, p. 659.
    b''. Smaller: base of forehead black; no black spot on the chest.
      a'''. Crown of head light bay ..... *socialis*, p. 660.
      b'''. Crown of head deep chestnut ..... *pinetorum*, p. 663.
  b'. Bill reddish brown; eyebrow ashy grey..... *pusilla*, p. 664. / *wortheni*, p. 666.
b. Crown of head streaked or mottled with black like the back.
  c'. Eyebrow rufescent; centre of crown sandy rufous, lighter than the sides ..... *pusilla* autumn., [p. 665.
  d'. Eyebrow white; centre of crown ashy.
    c''. A black band along either side of the crown..... *pusio*, p. 666.
    d''. No black bands on the crown, which is narrowly streaked with black ..... *breweri*, p. 668.
c. Head uniform ashy; throat black..... *atrigularis*, p. 669.

1. Spizella monticola.

Le Moineau de Canada, *Briss. Orn.* iii. p. 102 (1760); *Daubent. Pl. Enl.* iv. pl. 223. fig. 2.
Fringilla montana, *Forster, Phil. Trans.* lxii. p. 405 (1702, *nec L.*).
La Soulciet, *Buff. Hist. Nat. Ois.* iii. p. 500 (1775).
Mountain Finch, *Lath. Gen. Syn.* ii. pt. i. p. 265 (1783).
Fringilla monticola, *Gm. Syst. Nat.* i. p. 912 (1788).
Fringilla arborea, *Wilson, Amer. Orn.* ii. p. 123, pl. xvi. fig. 3 (1810).
Passerina monticola, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 27 (1817).
Emberiza canadensis, *Swains. & Rich. Faun. Bor.-Amer., Birds,*

p. 252 (1831); *Jard. ed. Wilson's Amer. Orn.* i. p. 267, pl. 16. fig. 3 (1832); *Audub. B. Amer.* 8vo, iii. p. 83, pl. 166 (1841).

Fringilla canadensis, *Audub. B. Amer.* pl. 188; *id. Orn. Biogr.* ii. p. 511 (1836), v. p. 504 (1839).

Spizella canadensis, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* i. p. 480 (1850); *Licht. Nomencl. Av. Berol.* p. 43 (1854).

Zonotrichia monticola, *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 94, no. 7398 (1870).

Spinites monticolus, *Cab. Mus. Hein.* Th. i. p. 134 (1850).

Spizella monticola, *Baird, B. N. Amer.* p. 472 (1858); *Coues, Proc. Philad. Acad.* 1861, p. 224; *Scl. Cat. Amer. B.* p. 114 (1862); *Coues, Proc. Philad. Acad.* 1866, p. 87; *Allen, Bull. Mus. C. Z.* iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 142 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 3, pl. 27. fig. 5 (1874); *Coues, B. N.-West*, p. 146 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 277 (1875); *Coues, Check-list N. Amer. B.* p. 56 (1882); *Salvin, Cat. Strickl. Coll.* p. 231 (1882); *Stearns, Proc. U.S. Nat. Mus.* vi. p. 117 (1883); *Merriam, Auk*, i. p. 295 (1884); *Turner, Proc. U.S. Nat. Mus.* viii. p. 240 (1885); *Bicknell, Auk*, ii. p. 144 (1885); *Agersb. t. c.* p. 280; *A. O. U. Check-list N. Amer. B.* p. 272 (1886); *Seton, Auk*, iii. p. 323 (1886).

Spizella montana (*nec L.*), *Ridgw. Proc. U. S. Nat. Mus.* iii. pp. 3, 179 (1880); *Dutcher, Auk*, i. p. 177 (1884); *Drew, Auk*, ii. p. 16 (1885).

Adult in winter plumage. General colour above rufous, the feathers of the mantle and back centred with black and edged with pale sandy buff; lower back and rump uniform brown, some of the feathers of the former with subterminal marks of white; lesser wing-coverts ashy; median coverts blackish, rather broadly tipped with white, forming a wing-bar; greater coverts blackish, externally rufous and white at the ends, forming a second wing-bar; bastard-wing, primary-coverts, and quills blackish brown, edged with ashy brown, hoary grey on the primaries, which are margined with white towards the ends, the inner secondaries pale rufous near the ends of the outer web; upper tail-coverts brown, with dusky centres; tail-feathers brown, edged with hoary white, the outer ones with a more distinct white margin; crown of head uniform light chestnut or bay, with slight remains of sandy-buff margins; the hind neck ashy, shaded over with brown; lores white, followed by a broad eyebrow of pale ashy grey; feathers round eye or eyelid whitish; ear-coverts pale ashy grey, with a streak of pale rufous along the upper edge; cheeks whitish anteriorly, becoming light ashy on the hinder part; throat and fore neck light ashy, with a spot of dusky blackish on the latter; breast and abdomen dull white; the sides of the upper breast light rufous; sides of body and flanks pale isabelline brown washed with ashy; thighs and under tail-coverts dull white, the latter with dusky centres; under wing-coverts and axillaries pale isabelline, edged with ashy white; quills below dusky, ashy whitish along the inner edge: "bill black above, yellow on the lower mandible; legs brown, toes black" (*E. Coues*). Total length 5·7 inches, culmen 0·4, wing 2·9, tail 2·55, tarsus 0·8.

Adult in summer plumage. Differs from the winter plumage only in being rather darker, owing to the abrasion of the pale tips to the

feathers. The white wing-bands are therefore not so pronounced, but the black spot on the breast is more plainly developed. The rufous crown is quite uniform, as the sandy-coloured edges are worn off.

The *adult female* is like the male.

Dr. Coues says that the *young birds* are at first streaked. After the first moult they are similar to the adult, "the chief variation being in the veiling of the cap with grey."

Hab. Eastern North America, westward to the plains, and from the Arctic Ocean south, in winter to the Carolines, Kentucky, and Eastern Kansas. Breeds north of the United States east of the Rocky Mountains. (*A. O. U. Check-list*, *l. c.*)

a. Ad. sk.	North America.	J. Gould, Esq.
b. Ad. sk.	North America (*J. Cassin*).	Sclater Coll.
c. Ad. sk.	Repulse Bay.	Dr. Rae [P.].
d. Ad. sk.	Canada.	Sclater Coll.
e. Ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
f. Ad. sk.	Chicago, Illinois, Oct. 30, 1878 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♂ ; *h–m*. ♀ ad. sk.	Grand Crossing, Illinois, March 29, 1884 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
n. ♂ ad. sk.	Mount Carmel, Illinois, Dec. 14, 1874 (*S. Turner* ; Sm. no. 85389).	U.S. Nat. Mus. [P.].
o. Ad. sk.	Cleveland, Ohio.	Prof. Kirtland [P.].
p. Ad. sk.	District of Columbia (*E. Coues*; Sm. no. 29049).	Salvin-Godman Coll.
q. Ad. sk.	Washington, D.C. (*C. Drexler*; Sm. no. 28655).	Salvin-Godman Coll.
r. ♀ ad. sk.	Soldiers' Home, D.C., Nov. 19, 1859 (*D. W. Prentiss* ; Sm. no. 59430).	U.S. Nat. Mus. [P.].
s. ♀ ad. sk.	Larned, Pawnee Country, Kansas, Feb. 26, 1885 (*G. C. Waterman*).	R. B. Sharpe, Esq. [P.].
t. ♂ ad. sk.	Indiana, Jan. 17, 1885 (*G. F. Morcom*).	H. K. Coale, Esq. [P.].

Subsp. *a*. Spizella ochracea.

Spizella monticola (*nec Gm.*), *Blakist. Ibis*, 1862, p. 6 ; *Dall & Bann. Trans. Chicago Acad.* i. p. 285 (1869) ; *Cooper, B. Calif.* p. 206 (1870) ; *Coues, Bull. U.S. Geol. Surv.* iv. p. 590 (1878).

Spizella monticola ochracea, *Brewster, Bull. Nutt. Orn. Club*, vii. p. 228 (1882) ; *Batchelder, Auk*, ii. p. 236 ; *Brewster, Auk*, iii. p. 139 (1886) ; *A. O. U. Check-list N. Amer. B.* p. 272 (1886).

Adult male. Similar to *S. monticola*, but everywhere paler, the rufous of the back replaced in a great degree by isabelline whitish ; the rump and lower back more ashy brown. Total length 5·5 inches, culmen 0·4, wing 3, tail 2·65, tarsus 0·75.

Adult female. Similar to the male. Total length 5·5 inches, culmen 0·4, wing 3·25, tail 2·7, tarsus 0·8.

Hab. Western North America, east to Dakota and Western Kansas, south in winter to New Mexico and Arizona, north to the Arctic Regions. Breeds in Alaska. (*A. O. U. Check-list, l. c.*)

a. ♀ ad. sk.	Fort Anderson, Arctic America, June 21, 1864 (*R. MacFarlane*; Sm. no. 43430).	Salvin-Godman Coll.
b, c. Ad. sk.	49th Parallel, April 1874 (*G. Dawson*).	N. A. Boundary Commission [P.].
d. Ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
e. ♂; *f, g.* ♀ ad.	West side of the Rocky Mountains.	J. K. Lord, Esq. [P.].

2. Spizella socialis.

Fringilla socialis, *Wils. Amer. Orn.* ii. p. 127, pl. 16. fig. 5 (1810); *Sw. Phil. Mag.* new ser. i. p. 435 (1827); *Audub. B. Amer.* pl. 104; *Jard. Orn. Biogr.* ii. p. 21 (1834), v. p. 517 (1839); *Nutt. Man.* i. p. 497 (1832).

Passerina socialis, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 29 (1817).

Emberiza socialis, *Jard. ed. Wils. Amer. Orn.* i. p. 271, pl. 16. fig. 5 (1832); *Audub. Syn.* p. 105 (1839); *id. B. Amer.* 8vo, iii. p. 80, pl. 165 (1841).

Spizella socialis, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* i. p. 480 (1850); *Licht. Nomencl. Av. Berol.* p. 43 (1854); *Baird, B. N. Amer.* p. 473 (1858); *Scl. P. Z. S.* 1858, p. 304, 1859, p. 365; *id. Cat. Amer. B.* p. 114 (1862); *Blakist. Ibis*, 1863, p. 78; *Scl. P. Z. S.* 1864, p. 174; *Coues, Ibis*, 1865, p. 159; *Dresser, t. c.* p. 489; *Baird, Ibis*, 1867, p. 268; *Brown, Ibis*, 1868, p. 422; *Sumichr. Mem. Bost. Soc.* i. p. 552 (1869); *Cooper, B. Calif.* p. 207 (1870); *Coues, Key B. N. Amer.* p. 142 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Baird, Brewer, & Ridgw. B. N. Amer.* ii. p. 7, pl. 27. fig. 1 (1874); *Coues, B. N.-West*, p. 148 (1874); *Gundl. J. f. O.* 1874, p. 121; *id. Orn. Cuba*, p. 90 (1876); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 21 (1876); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 19 (1878), v. p. 391 (1880); *Merrill, Proc. U.S. Nat. Mus.* i. p. 127 (1878); *Maynard, B. Florida*, p. 95 (1878); *Salvin, Cat. Strickl. Coll.* p. 231 (1882); *Brown, Auk*, 1884, p. 122; *Cory, B. West Indies*, p. 13 (1885); *Turner, Auk*, ii. p. 380 (1885); *Smith, Auk*, iii. p. 284 (1886); *Fox, t. c.* p. 318; *Seton, t. c.* p. 326; *Brewster, t. c.* p. 108; *Cory, t. c.* p. 212; *A. O. U. Check-list*, p. 272 (1886); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 377 (1886).

Zonotrichia socialis, *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 94, no. 7397 (1870).

Spinites socialis, *Cab. Mus. Hein.* Th. i. p. 133 (1850).

Emberiza pallida (*nec Swains.*), *Lembeye, Av. Cuba*, p. 54 (1850); *Brewer, Proc. Bost. Soc. Nat. Hist.* vii. p. 307 (1860).

Spinites pallidus (*nec Swains.*), *Cab. J. f. O.* 1856, p. 7.

Spizella socialis, var. arizonæ, *Coues, Key N. Amer. B.* p. 143 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 11 (1874); *Coues, B. N.-West*, p. 148 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 277 (1875); *Belding, Proc. U.S. Nat. Mus.* i. p. 416 (1879); *Cooper, op. cit.* ii. p. 248 (1880); *Belding, op. cit.* iv. p. 347 (1883); *Hensh. Auk*, iii. p. 74 (1886); *Brewster, t. c.* p. 139; *Anthony, t. c.* p. 169; *Everm. t. c.* p. 182.

Spizella domestica, *Coues, Check-list*, p. 36 (1882, *ex Bartr.*); *id. Key*

N. Amer. B. 2nd ed. p. 380 (1884); *Dutcher, Auk*, i. p. 175 (1884) *Bicknell, Auk*, ii. p. 145 (1885); *Agersb. t. c.* p. 280; *Ridgw. Auk*, iii. p. 179 (1886).

Spizella domestica arizonæ, *Coues, Key N. Amer. B.* 2nd ed. p. 380 (1884); *Beckh. Auk*, ii. p. 14 (1885); *Drew, t. c.* p. 16; *Ridgw. Auk*, iii. pp. 179, 217 (1886).

Spizella socialis arizonæ, *A. O. U. Check-list*, p. 273 (1886).

Spizella pusilla arenacea, *Chadb. Auk*, iii. p. 248 (1886).

Adult male. General colour above pale rufous-brown, the feathers of the back and mantle longitudinally streaked with black, and with paler edges; lower back and rump ashy grey; lesser wing-coverts dull ashy, washed with brown; median and greater coverts blackish, externally pale reddish brown, whitish at the ends, forming a not very pronounced double wing-bar; bastard-wing, primary-coverts, and quills blackish brown, edged with lighter brown, more ashy on the primaries and inclining to pale rufous-brown on the inner secondaries; upper tail-coverts dusky brown, with ashy margins; tail-feathers dark brown, with ashy-brown margins; crown of head uniform light chestnut or bay, slightly streaked with black on the nape and hind neck, the latter being rather more ashy; base of forehead black, divided by a narrow line of greyish white; lores and a distinct eyebrow white, as also the feathers round the eye; ear-coverts light ashy grey, with a dusky-brown line along the upper edge; cheeks and sides of neck dull whitish; throat, fore neck, and chest very pale ashy; breast and abdomen whiter; sides of body and flanks pale ashy brown; thighs light ashy brown; under tail-coverts white, with concealed dusky centres; under wing-coverts and axillaries dull white, the former with dusky bases, those near the edge of the wing dull ashy; quills below dusky, ashy whitish along the inner edge: "bill dusky; feet flesh-colour; iris brown" (*Audubon*). Total length 5·3 inches, culmen 0·4, wing 2·85, tail 2·3, tarsus 0·6.

Adult female. Similar to the male, but with a few more black streaks on the rufous crown. Total length 5·3 inches, culmen 0·4, wing 2·7, tail 2·25, tarsus 0·55.

I cannot see the least room for separating *Spizella arizonæ* even as a race from true *S. socialis*, specimens from Arizona and the neighbouring countries appearing to be identical in every respect with others from more northern localities.

Young. Differs from the adult in being streaked below. Instead of the chestnut head, the latter is streaked with black like the back and is of about the same tint. There is a slight yellowish tinge on the underparts, the throat, fore neck, breast, and sides of the body being very distinctly streaked with black. The bill is not black, but dull reddish brown.

After the *first moult* the young bird loses the streaks on the under surface, but has the head streaked with black like the back, though the general appearance of the plumage is more rufous. As the season advances the chestnut of the crown begins to assert itself, and is apparently assumed without a moult, by the gradual extension of

the chestnut on every feather and the obliteration of the median black stripes. The under surface of the body still retains a somewhat fulvescent tinge.

Adult birds also appear to have a distinct *winter* plumage, when the feathers of the crown are obscured by sandy-buff margins, the centre of the crown being sandy buff, so as to form a streak. The under surface is also more fulvescent than in summer, and the bill is reddish brown, blackish on the upper mandible. Many of the Mexican birds are in full summer plumage before leaving their winter home.

Hab. North America generally, north to the Great Slave Lake, south to Mexico.

a. Ad. sk.	Arctic America.	Sir G. Back [P.].
b. Ad. st.	Nova Scotia.	Purchased.
c, d. ♂; *e*. ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
f. ♂ ad. sk.	Fort Simpson, May 23, 1860 (*B. R. Ross*; Sm. no. 19767).	U.S. Nat. Mus. [P.].
g. Ad. sk.	49th Parallel, June 23, 1874 (*G. Dawson*).	N.A. Boundary Commission [P.].
h. ♀ juv. sk.	Albion, Wisconsin, Oct. 4, 1875 (Sm. no. 71031, *T. L. Kumber*).	U.S. Nat. Mus. [P.].
i, k. Ad. sk.	Michigan.	Prof. J. B. Steere [P.].
l. ♂ ad. sk.	Tollestone, Indiana, May 10, 1877 (*H. K. Coale*).	H. K. Coale, Esq. [P.].
m. ♀ ad. sk.	Colehour, Illinois, May 16, 1880 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
n. ♀ juv. sk.	Chicago, Sept. 11, 1878 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
o. Juv. sk.	Massachusetts (*H. W. Henshaw*; Sm. no. 63399).	Salvin-Godman Coll.
. ♂ ad. sk.	Glenville, Maryland, April 24, 1880.	H. K. Coale, Esq. [P.].
q. Juv. sk.	Park Woods, District of Columbia, Aug. 13, 1859 (*E. Coues*; Sm. no. 85030).	Salvin-Godman Co..
r. Ad. sk.	Washington, D.C. (*C. Drexler*; Sm. no. 29197).	Salvin-Godman Coll.
s. Ad. sk.	Meridian Hill, D.C., Oct. 5, 1859 (*E. Coues*; Sm. no. 29058).	Salvin-Godman Coll.
t. ♀ ad. sk.	Rockwood, Tennessee, April 7, 1884 (*W. H. Fox*; Sm. no. 97697).	U.S. Nat. Mus. [P.].
u. ♀ ad. sk.	Rocky Mountains, June 4.	Salvin-Godman Coll.
v. ♂ ad. sk.	S. Juan Island.	Dr. Lyall [P.].
w, x. Ad. sk.	British Columbia (*J. K. Lord*).	N.A. Boundary Commission.
y. ♂ ad. sk.	West side of Rocky Mountains.	J. K. Lord, Esq. [P].
z. Ad. sk.	Esquimalt (*Capt. A. H. Markham*).	Salvin-Godman Coll.
a', *b'*. Ad. sk.	Oregon.	Lord Walsingham [P.].
c', *d'*. ♂ ♀ ad. sk.	N. California, June 6, 1883 (*C. H. Townsend*; Sm. no. 91793–5).	U.S. Nat. Museum.

e'. ♂ ad. sk.	Cohuilla Valley, California, April 8, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
f'. ♀ ad. sk.	Haywards, California, June 31, 1881 (*W. O. Emerson*).	H. K. Coale, Esq. [P.].
g'. ♂ ad. sk.	Fort Whipple, Arizona (*E. Coues*; Sm. no. 37160).	H. K. Coale, Esq. [P.].
h'. Pull. sk.	Fort Whipple, Aug. 13, 1869 (*E. Coues*; Sm. no. 37136).	Salvin-Godman Coll.
i'. ♀ ad. sk.	Tucson, Arizona, April 17, 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
k'. ♀ ad. sk.	Bowie, Arizona, Sept. 9, 1873 (*Newberry*; Sm. no. 66925).	U.S. Nat. Mus. [P.].
l'. ♂ imm. sk.	Camp Lowell, Arizona, Sept. 10, 1874 (*H. W. Henshaw*; Sm. no. 69571).	U.S. Nat. Mus. [P.].
m'. ♂ imm. sk.	Apache, Arizona, Oct. 7, 1874 (*H. W. Henshaw*; Sm. no. 69568).	U.S. Nat. Mus. [P.].
n'. ♂ ad. sk.	Sangue de Christo Pass, Colorado (*C. E. Aitken*; Sm. no. 69581).	Salvin-Godman Coll.
o'–s'. Ad. sk.	Santa Fé, New Mexico, March 1883 (*G. F. Gaumer*).	Sclater Coll.
t'. ♂ ad. sk.	Santa Fé, July 24, 1874 (*H. W. Henshaw*; Sm. no. 69575).	H. K. Coale, Esq. [P.].
u'. ♂ juv. sk.	El Moro, New Mexico, July 23, 1873 (*H. W. Henshaw*; Sm. no. 66924).	U.S. Nat. Mus. [P.].
v'. Ad. sk.	El Paso, Texas, March 1882 (*G. F. Gaumer*).	Sclater Coll.
w'. Ad. sk.	Mexico (*White*).	Sclater Coll.
x'. Ad. sk.	Mexico.	J. Gould, Esq.
y'. Ad. sk.	Mexico.	Purchased.
z'. ♀ ad. sk.	Ciudad Durango, Nov. 8 (*A. Forrer*).	Salvin-Godman Coll.
a. ♂ ad. sk.	Ciudad Durango, July 9 (*A. Forrer*).	Salvin-Godman Coll.
β. Ad. sk.	Orizaba (*Botteri*).	Sclater Coll.
γ. ♂ ad. sk.	Villa de Elba, Mexico, Jan. 1862 (*A. Boucard*).	Salvin-Godman Coll.
δ. Ad. sk.	Jalapa, Mexico (*de Oca*).	Salvin-Godman Coll.
ε. Ad. st.	Mexico.	Purchased.

3. Spizella pinetorum.

Spizella pinetorum, *Salvin, P. Z. S.* 1863, p. 189; *id. Ibis*, 1866, p. 193; *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Ridgw. Ibis*, 1884, p. 44; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 378, tab. xxxvi. fig. 3 (1886).
Zonotrichia pinetorum, *Gray, Hand-l. B.* ii. p. 95, no. 7403 (1870).

Adult male (type of species). General colour above reddish brown, streaked with black centres to the feathers of the mantle and back; lower back and rump uniform ashy grey; lesser wing-coverts ashy grey; median and greater coverts blackish, externally rufous, edged at the ends with dull white; bastard-wing and primary-coverts

dusky, edged with ashy brown; quills dusky brown, the primaries narrowly margined with whity brown, the secondaries externally rufous; upper tail-coverts ashy grey; tail-feathers dusky brown, margined with whity brown; crown of head deep chestnut, with a lateral line of black extending to the nape, which is ashy grey like the hind neck, the latter streaked with black; forehead black, divided in the centre by a line of ashy grey; lores white, as well as a narrow eyebrow ending in pale ashy grey; eyelid whitish; ear-coverts dark ashy grey, blackish along the upper edge; cheeks and throat greyish white; remainder of under surface of body pale ashy grey, whiter on the abdomen; sides of body and flanks, as well as thighs, pale ashy grey; under tail-coverts white, the long ones centred with ashy; under wing-coverts and axillaries pale ashy, whitish on the margins; quills below dusky, ashy whitish along the inner edge. Total length 5·4 inches, culmen 0·4, wing 2·65, tail 2·25, tarsus 0·65.

In *winter plumage* the head is streaked with black, the grey median line of the forehead and also the grey of the hind neck is obscured by a wash of sandy buff. The sides of the face are browner, and the under surface of the body is washed with brown.

Hab. Guatemala, and Ruatan Island in the Bay of Honduras.

a. ♂ ad. sk.	Pine-ridge of Poctum, Guatemala, March 1862 (*O. S.*).	Salvin-Godman Coll. (Type of species.)
b. Ad. sk.	Guatemala (*Hague*).	Salvin-Godman Coll.
c. Ad. sk.	Ruatan Island (*G. F. Gaumer*).	Salvin-Godman Coll.

4. Spizella pusilla.

Little Sparrow, *Catesby, Nat. Hist. Carol.* i. p. 35 (1731).
? Le Moineau de Virginie, *Briss. Orn.* iii. p. 110 (1760).
? Rush Warbler, *Lath. Gen. Syn.* ii. pt. ii. p. 420 (1783).
? Motacilla juncorum, *Gm. Syst. Nat.* i. p. 952 (1788).
Fringilla pusilla, *Wilson, Amer. Orn.* ii. p. 121, pl. 16. fig. 2 (1810); *Audub. B. Amer.* pl. 139; *id. Orn. Biogr.* ii. p. 299 (1834).
Emberiza pusilla (*nec Pall.*), *Jard. ed. Wils. Amer. Orn.* ii. p. 265, pl. 16. fig. 2 (1832); *Audub. Syn.* p. 104 (1839); *id. B. Amer.* 8vo, iii. p. 77, pl. 164 (1841).
Fringilla juncorum, *Nutt. Man.* p. 499 (1832).
Zonotrichia pusilla, *Gray, Gen. B.* ii. p. 373 (1849); *id. Hand-l. B.* ii. p. 94, no. 7396 (1870).
Spizella pusilla, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* i. p. 480 (1850); *Licht. Nomenel. Av. Berol.* p. 43 (1854); *Baird, B. N. Amer.* p. 473 (1858); *Sel. Cat. Amer. B.* p. 114 (1862); *Dresser, Ibis*, 1865, p. 489; *Baird, Ibis*, 1867, p. 270; *Coues, Key N. Amer. B.* p. 143 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 5, pl. 27. fig. 2 (1874); *Coues, B. N.-West*, p. 148 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 179 (1881); *Bicknell, Auk*, ii. p. 145 (1885); *Agersb. t. c.* p. 280; *Brewster, Auk*, iii. p. 108 (1886); *Batchelder, t. c.* p. 314; *Fox, t. c.* p. 318; *Seton, t. c.* p. 324; *Dutcher, t. c.* p. 442; *A. O. U. Check-list N. Amer. B.* p. 273 (1886).
Spinites pusillus, *Cab. Mus. Hein.* Th. i. p. 133 (1850).

Adult male. General colour above rufous, the feathers of the mantle and back narrowly streaked with black down the centre and with pale margins; lower back and rump uniform ashy brown; lesser wing-coverts ashy grey; median and greater coverts blackish, externally edged with rufous-brown, and slightly tipped with white, forming a double wing-bar; the innermost coverts externally rufous like the scapulars; bastard-wing, primary-coverts, and quills blackish brown, edged externally with pale rufous-brown, more decidedly rufous on the secondaries, the primaries edged with hoary grey; upper tail-coverts ashy brown; tail-feathers light brown, edged with ashy brown, the outer ones fringed with white round the end of the inner web; crown of head uniform pale chestnut; base of forehead pale ashy; hind neck more ashy like the sides of the neck; lores and a distinct eyebrow pale ashy grey; feathers round eye white; sides of face, ear-coverts, cheeks, and throat pale ashy grey, whiter on the latter; a rufous streak along the upper edge of the ear-coverts; lower throat, fore neck, and chest pale fulvous-brown; breast and abdomen whiter; sides of body and flanks pale fulvous or isabelline brown; thighs ashy; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy whitish along the inner edge: "bill reddish brown or cinnamon-colour; feet pale yellowish brown; iris chestnut" (*Audubon*). Total length 4·8 inches, culmen 0·35, wing 2·5, tail 2·4, tarsus 0·7.

Adult female. Resembles the male. Total length 4·8 inches, culmen 0·35, wing 2·3, tail 2·25, tarsus 0·65.

The *adult in winter plumage* is more rufous-brown than in summer, with scarcely any ashy on the hinder neck; the head rufous-brown, with a median streak of dull sandy brown along the crown; sides of face entirely rufescent; cheeks, throat, fore neck, and sides of body pale rufescent brown, the breast and abdomen white.

Young. Differs from the adult in being striped underneath. Otherwise it much resembles the winter plumage of the adult, but is altogether duller brown; on the under surface there is a yellowish tinge; the throat, fore neck, chest, and sides of body streaked with blackish.

Hab. Eastern United States and Southern Canada, west to the Plains, extending into Mexico.

a. Ad. sk.	Mt. Carmel, Illinois (*S. Turner*; Sm. no. 85393).	U.S. Nat. Mus. [P.].
b. Ad. sk.	Lake Forest, Illinois, April 30, 1877 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. Imm. sk.	Halfday, Illinois, Aug. 30, 1878 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
d. Juv. sk.	Halfday, Aug. 24, 1877 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Libertyville, Illinois, May 1, 1877 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
f. ♂ ad. sk.	Grand Crossing, Illinois, March 29, 1884 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].

g. ♂ ad. sk.	Wheatland, Indiana, April 20, 1883 (*R. Ridgway*; Sm. no. 90302).	Salvin-Godman Coll.
h. Pull. sk.	Whitings, Indiana, June 16, 1878 (*H. K. C.*).	H. K. Coale, Esq. [P.].
i, k. Pull. sk.	Tollestone, Indiana, July 4, 1881 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
l. Ad. sk.	Pennsylvania (*J. Cassin*).	Sclater Coll.
m. Ad. sk.	District of Columbia, March 23, 1860 (*E. Coues*; Sm. no. 29052).	Salvin-Godman Coll.
n. ♂ ad. sk.	District of Columbia, April 27, 1870 (*R. Ridgway*).	H. K. Coale, Esq. [P.].
o. ♀ ad. sk.	District of Columbia, May 5, 1865 (*E. Coues*; Sm. no. 29055).	Salvin-Godman Coll.
p. Ad. sk.	Washington, D.C., Nov. 24, 1859 (*E. Coues*; Sm. no. 85031).	U.S. Nat. Museum.
q. ♂ ad. sk.	Virginia (*W. Palmer*; Sm. no. 83560).	U.S. Nat. Museum.
r. Ad. sk.	Mexico.	Zoological Society.

5. Spizella wortheni.

Spizella wortheni, *Ridgw. Proc. U.S. Nat. Mus.* vii. p. 259 (1884); *A. O. U. Check-list N. Amer. B.* p. 273 (1886).

Adult male. Resembling *S. pusilla*, but altogether less rufous, with the black streaks of the dorsum broader, the rufous auricular streak and rufous spot on sides of the breast wholly absent, the wing-bands much less distinct, the eyelids distinctly white, and the bill more slender; pileum light fulvous-brown, broadly and rather sharply streaked with black; rump and upper tail-coverts brownish ash-grey, the latter with rather distinct medial streaks of dusky; wings dusky, all the feathers edged with light greyish brown, middle coverts tipped with buffy whitish, but terminal light margins of the greater coverts scarcely more distinct than the lateral edgings, and not forming an appreciable band; entire side of head ashy grey, including the anterior part of the forehead and whole superciliary and supra-auricular region; no trace of a rufous or brown postocular streak; eyelids white, forming a rather distinct orbital ring; chin and throat greyish white; remaining lower parts brownish white, deeper on the jugulum, especially laterally, where, however, the colour does not incline to rufous; crissum and lining of wing nearly pure white; bill cinnamon-brown; legs and feet horn-brown. Wing 2·70 inches, tail (somewhat worn) 2·50, culmen from extreme base 0·40, bill from nostrils 0·25, depth at base 0·18, tarsus 0·70, middle toe 0·45. (*Ridgway.*)

Hab. New Mexico and Western Texas.

6. Spizella pusio.

Fringilla pusio, *Licht. Preis Verz. Mex., Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 56.

Emberiza pallida, *Swains. Faun. Bor.-Amer., Birds*, p. 251 (1831).

Spizella pallida, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838) *Baird, B. N. Amer.* p. 474 (1858); *id. Mex. Bound. Surv.* ii

Birds, p. 16 (1858); *Scl. P. Z. S.* 1859, p. 379; *id. Cat. Amer. B.* p. 114 (1862); *Blakist. Ibis*, 1862, p. 6, 1863, p. 79; *Coues, Ibis*, 1865, pp. 58, 164; *Dresser, t. c.* p. 489; *Baird, Ibis*, 1867, p. 270; *Dugès, La Nat.* p. 140 (1868); *Allen, Bull. Mus. Comp. Zool.* iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 143 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 11, pl. 27. fig. 3 (1874); *Coues, B. N.-West*, p. 148 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 278 (1875); *Coues, Bull. U.S. Geol. Surv.* iv. p. 91 (1878); *Sennett, t. c.* p. 19; *Merrill, Proc. U.S. Nat. Mus.* i. p. 127 (1878); *Ridgw. op. cit.* iii. p. 179 (1881); *Coues, Check-list N. Amer. B.* p. 56 (1882); *Belding, Proc. U.S. Nat. Mus.* v. p. 540 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 381 (1884); *Drew, Auk*, ii. p. 16 (1885); *Beckh. t. c.* p. 14; *Agersb. t. c.* p. 280; *Seton, Auk*, iii. p. 324 (1886); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 378 (1886); *A. O. U. Check-list N. Amer. B.* p. 273 (1886).

Emberiza shattuckii, *Audub. B. N. Amer.* 8vo, viii. App. p. 230, pl. 493 (1843).

Zonotrichia pallida, *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 95, no. 7400 (1870).

Zonotrichia shattuckii, *Gray, Gen. B.* ii. p. 374 (1849).

Spizella shattuckii, *Bp. Consp.* i. p. 480 (1850).

Spinites pallidus, *Cab. Mus. Hein.* Th. i. p. 133 (1850).

Spinites shattuckii, *Cab. Mus. Hein.* Th. i. p. 133 (1850).

Adult male. General colour above light brown, the mantle and upper back mottled with longitudinal black centres to the feathers, which have light fulvous-brown edges; lower back and rump uniform ashy ochreous-brown; lesser wing-coverts ashy ochreous-brown; median and greater coverts black, externally edged with sandy buff, white towards the ends; bastard-wing, primary-coverts, and quills blackish brown, externally margined with sandy buff, hoary white on the edges of the primaries; upper tail-coverts ochreous-brown; tail-feathers brown, edged with ashy brown; centre of crown of head ashy grey, white at the base of the forehead, the sides of the crown forming two black bands, the feathers edged with sandy brown; hind neck and sides of neck ashy grey; lores and a distinct eyebrow white; feathers round eye, sides of face, and ear-coverts pale sandy brown, with a distinct black line along the upper edge of the ear-coverts; cheeks white, separated from the ear-coverts by a narrow black line; throat and under surface of body ashy white, with an indistinct dusky malar streak separating the cheeks and the throat; breast and abdomen white; lower throat, fore neck, sides of body, and flanks pale ochreous brown; thighs and under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy along the inner edge. Total length 4·8 inches, culmen 0·35, wing 2·45, tail 2·25, tarsus 0·65.

Adult female. Not different from the male. Total length 4·8 inches, culmen 0·4, wing 2·35, tail 2·25, tarsus 0·65.

The *adult in winter plumage* is more rufescent than in summer, and the lateral bands on the side of the crown are rufous-brown, with black centres; there is also less ashy on the neck, and the under surface has more of a fulvescent tinge; the outer aspect of the wings also is more decidedly rufous.

Hab. Interior of North America, from Illinois and Iowa west to the Rocky Mountains, Arizona, and Cape St. Lucas, and from Texas north to the Saskatchewan Plains (*A. O. U. Check-list, l. c.*). Mexico; Cuba.

a. Ad. sk.	Turtle Mountain, July 23, 1873 (*E. Coues*; Sm. no. 65864).	U.S. Nat. Mus. [P.].
b, c. ♂ ♀ ad. sk.	Pembina, Dakota, June 7, 1873 (*E. Coues*; Sm. nos. 63983, 63987).	Salvin-Godman Coll.
d. ♂ ad. sk.	49th Parallel, May 24, 1874 (*G. Dawson*).	N.A. Boundary Commission.
e. Ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
f. Ad. sk.	Missouri (*G. N. Lawrence*).	Sclater Coll.
g. ♂ ad. sk.	Nebraska (*Dr. Hayden*; Sm. no. 4804).	Sclater Coll.
h. Ad. sk.	Gainsville, Texas (*G. H. Ragdale*).	R. B. Sharpe, Esq. [P.].
i. Imm. sk.	Crittenden, Arizona, Sept. 1, 1874 (*H. W. Henshaw*; Sm. no. 68571).	U.S. Nat. Mus. [P.].
k. ♀ ad. sk.	Puebla, Mexico, Jan. 1865 (*A. Boucard*).	Salvin-Godman Coll.
l. ♀ ad. sk.	Puebla.	A. Boucard [C.].

7. Spizella breweri.

Emberiza pallida (*nec Swains.*), *Audub. B. Amer.* pl. cccxcviii.; *id. Orn. Biogr.* v. p. 66 (1839); *id. B. Amer.* iii. p. 71, pl. 161 (1841).

Spizella pallida (*nec Swains.*), *Bp. Consp.* i. p. 480; *Woodh. in Sitgr. Rep. Exped. Zuni & Color. R.* p. 83 (1853); *Coues, Ibis*, 1865, p. 164; *Allen, Bull. Mus. Comp. Zool.* iii. p. 177 (1872); *Snow, B. Kansas*, p. 10 (1872).

Spizella breweri, *Cass. Proc. Philad. Acad.* 1856, p. 40; *Baird, B. N. Amer.* p. 475 (1858); *id. Mex. Bound. Surv., Birds*, p. 16 (1858); *Coues, Proc. Philad. Acad.* 1866, p. 87; *Cooper, B. Calif.* p. 209 (1870); *Merrill, Proc. U.S. Nat. Mus.* i. p. 417 (1878); *Ridgw. Proc. U. S. Nat. Mus.* iii. pp. 3, 179 (1881); *Coues, Check-list N. Amer. B.* p. 57 (1882); *Belding, Proc. U.S. Nat. Mus.* v. p. 541 (1883), vi. p. 343; *Brown, Auk*, i. p. 121 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 381 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list N. Amer. B.* p. 273 (1886); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 379 (1886).

Spizella pallida, var. breweri, *Coues, Key N. Amer. B.* p. 143 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 13, pl. 27. fig. 4 (1874); *Coues, B. N.-West*, p. 151 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 279 (1875).

Zonotrichia breweri, *Gray, Hand-l. B.* ii. p. 94, no. 7399 (1870).

Adult male. Very similar to *S. pallida*, but wanting the black bands on the side of the crown, which is almost uniform brown with black streaks, thus resembling the back: "bill yellow, greyish brown towards the end; feet flesh-coloured; claws dusky brown" (*Audubon*). Total length 4·7 inches, culmen 0·4, wing 2·45, tail 2·3, tarsus 0·65.

Adult female. Similar to the male. Total length 4·6 inches, culmen 0·35, wing 2·45, tail 2·2, tarsus 0·7.

Hab. South-western United States, New Mexico, Arizona, ranging into Mexico.

a. Ad. sk.	Camp Grant, Arizona, March 1, 1867 (*Dr. E. Palmer*; Sm. no. 49744).	Salvin-Godman Coll.
b. ♂ ad. sk.	Apache, Arizona, Aug. 6, 1873 (*H. W. H.*; Sm. no. 66934).	R. B. Sharpe, Esq. [P.].
c. Ad. sk.	Camp Thorne, Yellowstone River, July 18, 1873 (Sm. no. 65190).	Salvin-Godman Coll.
d. ♀ ad. sk.	El Paso County, Colorado, May 29, 1872 (*C. E. Aiken*).	H. K. Coale, Esq. [P.].
e. ♂ ad. sk.	Fort Garland, Colorado, June 23, 1873 (*H. W. Henshaw*; Sm. no. 72300).	Salvin-Godman Coll.
f. ♂ ad. sk.	Aqua Caliente, California, March 26, 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Cohuilla Valley, California, April 16, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
h. Imm. sk.	Ciudad Durango, Mexico, Oct. 24 (*A. Forrer*).	Salvin-Godman Coll.

8. Spizella atrigularis.

Spinites atrigularis, *Cab. Mus. Hein.* Th. i. p. 133 (1850).
Struthus atrimentalis, *Couch, Proc. Philad. Acad.* vii. p. 67 (1854).
Spizella atrogularis, *Baird, B. N. Amer.* p. 476 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 16, pl. 17. fig. 1 (1858); *Dugès, La Nat.* i. p. 140 (1868); *Cooper, B. Calif.* p. 210 (1870); *Coues, Key N. Amer. B.* p. 144 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 15 (1874); *Lawr. Bull. U.S. Nat. Mus.* ii. p. 21 (1876); *Coues, Check-list N. Amer. B.* p. 57 (1882); *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 179, 232 (1881); *Belding, op. cit.* vi. p. 348 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 381 (1884); *A. O. U. Check-list N. Amer. B.* p. 274 (1886); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 380 (1886).
Spizella evura, *Coues, Ibis*, 1865, pp. 118, 164; *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 235 (1881).
Zonotrichia atrigularis, *Gray, Hand-l. B.* ii. p. 95, no. 7401 (1870).

Adult male. General colour above reddish brown, the mantle and upper back streaked with blackish brown; lower back and rump ashy grey, slightly washed with brown; scapulars more decidedly rufous than the back; lesser wing-coverts ashy grey; median and greater coverts blackish, edged with pale rufous, fulvescent towards the ends; bastard-wing, primary-coverts, and quills blackish brown, edged with ashy, inclining to hoary grey on the primaries, the secondaries margined with pale rufous; upper tail-coverts ashy like the rump; tail-feathers dusky brown, margined with ashy brown, inclining to whitish on the edges and tips of the outer feathers; crown of head and hind neck dark ashy grey, slightly overshaded with brown, the grey shade extending on to the upper mantle; base

of forehead, lores, feathers round eye, fore part of cheeks, and throat black; ear-coverts dark ashy grey, also the hinder part of the cheeks and sides of neck; remainder of under surface of body from the fore neck downwards ashy grey, inclining to ashy whitish on the lower breast and abdomen; sides of body and flanks also ashy, slightly tinged with brown; thighs and under tail-coverts ashy grey, with ashy-whitish margins; under wing-coverts and axillaries ashy grey, with whitish margins; quills below dusky, whitish along the inner edge: "bill coral-red; feet dark brown" (*E. Coues*). Total length 5·5 inches, culmen 0·4, wing 2·7, tail 2·8, tarsus 0·75.

Mexican specimens appear to be larger than those from the Southern United States, which have the wing 2·35-2·5 inches, as against 2·7 inches in the former.

The *adult female* does not seem to differ from the male in colour. Young birds are browner than the adults, and have no black on the face or throat, these parts being ashy grey, like the under surface of the body. The grey feathers of the head and neck are tipped with brown edgings.

Hab. Southern border of the United States, from Texas to California, south into Mexico (*A. O. U. Check-list, l. c.*).

a. ♂ ad. sk.	Fort Whipple, Arizona, April 19, 1865 (*E. Coues*; Sm. no. 40820).	Salvin-Godman Coll.
b. ♂ ad. sk.	Santa Anna River, California, June 16, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
c. ♀ ad. sk.	Cajon Pass, California, June 4 1880 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
d, *e*. Ad. sk.	Mexico.	Salvin-Godman Coll.
f. ♀ imm. sk.	Mexico (*De Saussure*).	Sclater Coll.
g. ♂ ad. sk.	City of Mexico (*Elwes*).	Sclater Coll.
h. ♂ imm. sk.	Puebla, Mexico, Feb. 1866 (*A. Boucard*).	Salvin-Godman Coll.

70. POŒCETES.

Type.

Poœcetes, *Baird, B. N. Amer.* p. 447 (1885) ..... P. gramineus.

Range. The greater part of North America south to Mexico.

1. Poœcetes gramineus.

Grass Finch, *Lath. Gen. Syn.* ii. pt. i. p. 273 (1783); *Penn. Arctic Zool.* ii. p. 375 (1785).

Fringilla graminea, *Gm. Syst. Nat.* i. p. 922 (1788); *Audub. B. Amer.* pl. 94; *id. Orn. Biogr.* i. p. 473 (1831), v. p. 502 (1839).

Emberiza graminea, *Wils. Amer. Orn.* iv. p. 51, pl. 31. fig. 5 (1811); *Audub. B. Amer.* 8vo, iii. p. 65, pl. 159 (1841).

Fringilla (Zonotrichia) graminea, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 254 (1831).

Zonotrichia graminea, *Jard. ed. Wilson's B. Amer.* ii. p. 45, pl. 31. fig. 5 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838) *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850) *Gray, Hand-l. B.* ii. p. 95, no. 7414 (1870).

Pœcetes gramineus, *Baird, B. N. Amer.* p. 447 (1858); *Sclater, P. Z. S.* 1859, p. 379; *id. Cat. Amer. B.* p. 112 (1862); *Coues, Ibis*, 1865, p. 164; *Dresser, t. c.* p. 487; *Cooper, B. Calif.* p. 186 (1870); *Allen, Bull. Mus. Comp. Zool.* iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 137 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 545, pl. 29. fig. 1 (1874); *Coues, B. N.-West*, p. 129 (1874); *Maynard, B. Florida*, p. 103 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 126 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 178 (1881); *Salvin, Cat. Strickl. Coll.* p. 229 (1882); *Coues, Check-list N. Amer. B.* p. 52 (1882); *Dutcher, Auk*, i. p. 31 (1884); *Bicknell, t. c.* p. 330; *Coues, Key N. Amer. B.* 2nd ed. p. 364 (1884); *Seton, Auk*, ii. p. 23 (1885); *Beckham, t. c.* p. 141; *Agersb. t. c.* p. 280; *Merriam, t. c.* p. 315; *A. O. U. Check-list N. Amer. B.* p. 264 (1886); *Batchelder, Auk*, iii. p. 314 (1886); *Fox, t. c.* p. 317.

Adult male. General colour above streaked, the feathers of the mantle and back brown, slightly tinged with rufous and mesially streaked with blackish brown; the lower back, rump, and upper tail-coverts more ashy brown, and not so broadly streaked with blackish; lesser wing-coverts chestnut, with blackish bases; median coverts blackish, tipped with rufous and edged with dull white; greater coverts blackish, externally edged with ashy brown, rufescent toward the tip, which is whitish; bastard-wing blackish, edged with rufous; primary-coverts and quills blackish brown, edged with ashy brown, the first primary with whity brown, the secondaries externally browner; tail-feathers blackish brown, edged with ashy brown, the outer one for the most part white, with an oblique blackish mark along the inner web; the second feather edged with white along the end of the outer web; crown of head like the back, and similarly streaked with black; hind neck rather more ashy brown, less distinctly streaked; lores and eyelid dull white, as well as a streak above the ear-coverts, forming an indistinct eyebrow; ear-coverts ashy brown, rufescent along the upper margin, with a black spot on the hinder margin; feathers below the eye and cheeks dull white, the latter separated from the ear-coverts by a line of blackish brown, a second broad line of blackish separating the cheeks from the throat, which is white; remainder of under surface of body isabelline white; the lower throat, fore neck, and chest spotted with triangular markings of blackish brown; breast and abdomen uniform; sides of body and flanks isabelline buff, distinctly streaked with blackish brown; thighs isabelline; under tail-coverts white; under wing-coverts and axillaries white, the former with dusky bases near the outside of the wing; quills below dusky, ashy isabelline along the inner edge: "upper mandible brown; lower mandible and the feet flesh-coloured or yellowish" (*E. Coues*); "iris hazel" (*Audubon*). Total length 5·4 inches, culmen 0·45, wing 3·2, tail 2·35, tarsus 0·8.

Adult female. Like the male. Total length 5·8 inches, culmen 0·45, wing 3·1, tail 2·35, tarsus 0·75.

In *autumn plumage* the aspect of the adults is much more rufous than in summer, especially on the margins of the scapulars and

inner secondaries; there is also a strong rufous tint on the sides of the face and the under surface of the body, the black streaks being edged with rufous. The white on the outer tail-feathers varies considerably, especially on the penultimate one, which has often a tolerably large white mark at the end.

Hab. Eastern North America to the Plains, from Nova Scotia and Ontario southward; breeds from Virginia, Kentucky, and Missouri northward (*A. O. U. Check-list*, *l. c.*).

a. Ad. st.	North America.	Purchased.
b. Ad. sk.	North America.	J. J. Audubon, Esq. [P.].
c. Ad. sk.	Niagara Falls.	Gould Coll.
d. Ad. sk.	Montreal, Canada.	Sclater Coll.
e. Imm. sk.	Wisconsin, Sept. 1856 (*P. L. S.*).	Sclater Coll.
f. Ad. sk.	Michigan.	Prof. J. B. Steere [P.].
g. ♂ ad. sk.	Lake Forest, Illinois, May 1, 1877 (*H. K. Coale*; Sm. no. 80745).	U.S. Nat. Mus. [P.].
h. ♀ ad. sk.	Highwood, Illinois, May 23, 1878 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. Imm. sk.	Illinois, Sept. 17, 1879.	H. K. Coale, Esq. [P.].
k. ♀ ad. sk.	Hyde Park, Illinois, May 7, 1878 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Pine, Indiana, Sept. 9, 1874 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
m. ♂ ad. sk.	Glanville, Maryland, April 24, 1880 (*H. K. C.*).	H. K. Coale, Esq. [P.].
n. ♂ ad. sk.	District of Columbia, March 5, 1859 (*E. Coues*; Sm. no. 29117).	Salvin-Godman Coll.
o. Ad. sk.	D. Columbia, April 5, 1860 (*E. Coues*; Sm. no. 29019).	Salvin-Godman Coll.
p. ♀ ad. sk.	D. Columbia, Aug. 14, 1872 (*Dr. W. Scott*; Sm. no. 79307).	U.S. Nat. Mus. [P.].
q. ♂ ad. sk.	Fairfax Co., Virginia, May 11 (*R. Ridgway*; Sm. no. 83470).	Salvin-Godman Coll.

Subsp. *a*. Poœcetes confinis.

Zonotrichia graminea (*nec Gm.*), *Woodh. in Sitgr. Rep. Expl. Zuni & Color. R.* p. 84 (1854).

Poœcetes gramineus, var. confinis, *Baird, B. N. Amer.* p. 448 (1858); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 545 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 256 (1875).

Poœcetes gramineus (*nec Gm.*), *Baird, Mex. Bound. Surv.* ii. *Birds*, p. 15 (1858); *Blakist. Ibis*, 1882, p. 6, 1863, p. 75; *Dugès, La Nat.* p. 140 (1868); *Coues, Bull. U.S. Geol. Surv.* iv. p. 589 (1878); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 383 (1886).

Poœcetes confinis, *Yarrow, Rep. Orn. Specs. Wheeler's Exped.* 1874, p. 34.

Pœcetes gramineus confinis, *Sennett, Bull. U.S. Geol. Surv.* iv. p. 17 (1878); *Belding, Proc. U.S. Nat. Mus.* i. p. 415 (1879); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Coues, Check-list N. Amer. B.* p. 52 (1882); *Belding, Proc. U.S. Nat. Mus.* vi. p. 350 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 365 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-list N. Amer. B.* p. 264 (1886); *Seton, Auk*, iii. p. 323 (1886).

Adult. Similar to *P. gramineus*, but altogether greyer, the upper surface being ashy brown, and not so heavily streaked as in the last-named bird; under surface of body also less distinctly streaked than in *P. gramineus*, and the sides of the body more ashy. Total length 5·8 inches, culmen 0·5, wing 3·2, tail 2·3, tarsus 0·8.

Adult male. Total length 5·5 inches, culmen 0·45, wing 3·1, tail 2·25, tarsus 0·8.

Adult female. Total length 5·5 inches, culmen 0·45, wing 3·1, tail 2·3, tarsus 0·8.

The *autumn plumage* is slightly more rufescent than the summer plumage, and at that season of the year there is more resemblance to the true *P. gramineus*, but whether an actual gradation takes place between the two forms I am unable to say. Dr. Coues calls *P. confinis* a "paler, greyer form from the dry western regions."

Hab. Western United States, from the Plains to the Pacific, south into Mexico (*A. O. U. Check-list, l. c.*).

a, b. Ad. sk.	49th Parallel, June 1874 (*G. Dawson*).	N.A.Boundary Commission [P.].
c. Ad. sk.	Milk River, lat. 49°, July 24, 1874 (*E. Coues*; Sm. no. 67546).	Salvin-GodmanColl.
d. ♂ ad. sk.	Turtle Mountain, July 20, 1873 (*E. Coues*; Sm. no. 65818).	U.S. Nat. Mus. [P.].
e, f. Ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
g. Ad. sk.	California (*Schultè*).	Sclater Coll.
h. Ad. sk.	Laramie Peak, Wyoming, July 9, 1864 (*R. B. Hitz*; Sm. no. 95164).	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Rio Blanco, Colorado, Sept. 9, 1874 (*C. E. Aitken*; Sm. no. 69631).	U.S. Nat. Mus. [P.].
k. ♂ ad. sk.	Denver, Colorado, May 7, 1873 (*H. W. Henshaw*; Sm. no. 71296).	U.S. Nat. Mus. [P.].
l. ♀ ad. sk.	Arizona, Sept. 1874 (*H. W. Henshaw*; Sm. no. 69626).	Salvin-Godman Coll.
m. ♂ ad. sk.	Camp Grant, Arizona, Sept. 22, 1873 (*Maquet*; Sm. no. 66857).	Salvin-Godman Coll.
n. ♂ ad. sk.	Tucson, Arizona, April 9, 1884 (*F. Stephens*).	H. K. Coale, Esq. [P.].
o. ♀ ad. sk.	Oaxaca, Mexico (*A. Boucard*).	Sclater Coll.
p. ♂ ad. sk.	Oaxaca, Nov. 1866 (*A. Boucard*).	Salvin-Godman Coll.
q. Ad. sk.	Jalapa (*De Oca*).	Salvin-Godman Coll.
r. Ad. sk.	Jalapa (*Höge*).	Salvin-Godman Coll.

71. PASSERCULUS.

Type.

Passerculus, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838) ..... P. savanna.
Centronyx, *Baird, B. N. Amer.* p. 440 (1858) ..... P. bairdi.

Head of *Passerculus sandwichensis*.

Range. The whole of North America, ranging into Mexico and Guatemala, as well as the islands off the Yucatan coast; Bahamas.

Key to the Species.

a. With a tinge of yellow over the eye and on the edge of the wing.
  a'. Smaller: wing not exceeding 3 inches; streaked with black on the flanks; eyebrow fulvescent or yellow ..... *sandwichensis*, p. 674.
  b'. Larger: wing 3 inches; more streaked with pale rufous on the flanks; eyebrow white.. *princeps*, p. 679.
b. No yellow over the eye or on the edge of the wing; colour uniform above, not streaked ... *rostratus*, p. 680.
c. No yellow over the eye; upper surface streaked; centre of crown and hinder crown pale tawny; lesser wing-coverts uniform rufous .. *bairdi*, p. 681.

1. Passerculus sandwichensis.

Aoonalashka Bunting, *Penn. Arctic Zool.* ii. p. 363 (1785).
Sandwich Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 202 (1783).
Emberiza sandwichensis, *Gm. Syst. Nat.* i. p. 875 (1788).
Emberiza arctica, *Lath. Ind. Orn.* i. p. 414 (1790).
Emberiza chrysops, *Pall. Zoogr. Rosso-Asiat.* ii. p. 45, pl. 48. fig. 1 (1811).
Fringilla savanna, *Wilson, Amer. Orn.* iii. p. 55, pl. 22. fig. 3 (1811), iv. p. 72, pl. 34. fig. 4 (1811); *Nutt. Man.* p. 489 (1832); *Audub. B. Amer.* pl. 109; *id. Orn. Biogr.* ii. p. 63 (1834), v. p. 516 (1839).
Passerina savanna, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 26 (1817).
Passerculus savanna, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* i. p. 480 (1850); *Cab. Mus. Hein.* Th. i. p. 131 (1850); *Baird, B. N. Amer.* p. 442 (1858); *Coues, Proc. Philad. Acad.* 1861, p. 223; *Scl. Cat. Amer. B.* p. 112 (1862); *Blakist. Ibis*, 1863, p. 74; *Coues, Ibis*, 1866, p. 269; *Dall & Bann. Trans. Chicago Acad.* i. p. 283 (1869); *Allen, Bull. Mus. C. Z.* ii. p. 272 (1871), iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 136 (1872); *Maynard, B. East. U.S.* p. 100; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 534, pl. 24. fig. 8 (1874); *Coues, B. N.-West*, p. 127 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 256 (1875); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 17 (1878); *Coues, t. c.* p. 588; *Sennett, op. cit.* v.

p. 390 (1879); *Belding, Proc. U.S. Nat. Mus.* i. p. 415 (1879); *Cory, B. Bahamas*, p. 88 (1880); *Coues, Check-list N. Amer. B.* p. 52 (1882); *Salvin, Cat. Strickl. Coll.* p. 228 (1882); *Cory, B. West Indies*, p. 13 (1885).

Emberiza savanna, *Audub. Syn.* p. 103 (1839); *id. B. Amer.* iii. p. 68, pl. 160 (1841); *Giraud, B. Long Isl.* p. 102 (1844).

Passerculus sandwichensis, *Baird, B. N. Amer.* p. 444 (1858); *Scl. Cat. Amer. B.* p. 112 (1862); *Blakist. Ibis*, 1863, p. 75; *Brown, Ibis*, 1868, p. 422; *Dall & Bann. Trans. Chicago Acad.* i. p. 284 (1869); *Cooper, B. Calif.* p. 180 (1870); *Belding, Proc. U.S. Nat. Mus.* i. p. 415 (1879); *Ridgw. op. cit.* iii. p. 178 (1881); *Coues, Check-list N. Amer. B.* p. 52 (1882); *Salvin, Cat. Strickl. Coll.* p. 229 (1882); *Bean, Proc. U.S. Nat. Mus.* v. pp. 151, 172 (1882); *Turner, Auk*, ii. p. 157 (1885); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 380 (1886).

Fringilla arctica, *Vigors, Zool. Beechey's Voy. 'Blossom,'* p. 20 (1839).

Zonotrichia savanna, *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 95, no. 7408 (1870).

Euspiza arctica, *Bp. Consp.* i. p. 469 (1850).

Passerculus alaudinus, *Bp. C. R.* xxxvii. p. 918 (1853); *Baird, B. N. Amer.* p. 446 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 15 (1858); *Scl. P. Z. S.* 1858, p. 303; *id. & Salv. Ibis*, 1860, p. 398; *Dresser, Ibis*, 1865, p. 487; *Coues, Proc. Philad. Acad.* 1866, p. 84; *id. Ibis*. 1866, p. 269; *Elliot, New and Unfig. B. N. Amer.* pl. 13 (1869); *Dall & Bann. Trans. Chicago Acad.* i. p. 284 (1869); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Cooper, B. Calif.* p. 181 (1870).

Passerculus anthinus, *Bp. C. R.* xxxvii. p. 919 (1853); *Baird, B. N. Amer.* p. 445 (1858); *Sclater, Cat. Amer. B.* p. 112 (1862); *Coues, Ibis*, 1866, p. 268; *Elliot, New and Unfig. B. N. Amer.* pl. 13 (1869); *Dall & Bann. Trans. Chicago Acad.* i. p. 284 (1869); *Cooper, B. Calif.* pp. 183, 187 (1870); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 2 (1881); *Belding, op. cit.* v. p. 528 (1883).

Zonotrichia sandwichensis, *Gray, Hand-l. B.* ii. p. 95, no. 7409 (1870).

Zonotrichia anthinus, *Gray, Hand-l. B.* ii. p. 95, no. 7410 (1870).

Zonotrichia alaudina, *Gray, Hand-l. B.* ii. p. 95, no. 7411 (1870); *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 51 (1872).

Zonotrichia arctica, *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 46 (1872).

Passerculus savanna, var. anthinus, *Coues, Key N. Amer. B.* p. 136 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 539, pl. 24. fig. 10 (1874).

Passerculus savanna, var. sandwichensis, *Coues, Key N. Amer. B.* p. 136 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 538, pl. 24. fig. 9 (1874).

Passerculus savanna, *b.* anthinus, *Coues, B. N.-West*, p. 128 (1874).

Passerculus savanna, *c.* sandwichensis, *Coues, t. c.* p. 128.

Passerculus savanna, var. alaudinus, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 537, pl. 24. fig. 11 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 254 (1875); *Lawr. Bull. U.S. Nat. Mus.* no. iv. p. 21 (1876); *Merrill, Proc. U.S. Nat. Mus.* i. p. 126 (1878).

Passerculus savanna anthinus, *Streets, Bull. U.S. Nat. Mus.* no. 7, p. 9 (1877).

Passerculus sandwichensis, var. alaudinus, *Ridgw. Orn. 40th Parallel*, p. 464 (1877); *Cooper, Proc. U.S. Nat. Mus.* ii. p. 247 (1880).

Passerculus sandwichensis savanna, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 178 (1881); *Coues, Check-list,* p. 52 (1882); *Stearns, op. cit.* vi. p. 117 (1883); *Turner, op. cit.* viii. p. 240 (1885); *Drew, Auk,* ii. p. 16 (1885); *Lawrence, t. c.* p. 272; *Agersb. t. c.* p. 280; *Fox, Auk,* iii. p. 317 (1886).

Passerculus sandwichensis alaudinus, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 178 (1881), vi. p. 350 (1883); *Coues, Check-list,* p. 52 (1882); *id. Key N. Amer. B.* 2nd ed. p. 363 (1884); *Murdoch, Auk,* ii. p. 201 (1885); *Nelson, t. c.* p. 240.

Passerculus sandwichensis anthinus, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 178 (1881); *Coues, Check-list N. Amer. B.* p. 52 (1882).

Passerculus beldingi, *Ridgw. Proc. U.S. Nat. Mus.* vii. p. 516 (1885).

Passerculus sandwichensis bryanti, *Ridgw. op. cit.* vii. p. 517 (1885).

Ammodromus sandwichensis, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 354 (1885); *A. O. U. Check-list N. Amer. B.* p. 265 (1886).

Ammodromus sandwichensis savanna, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 354 (1885); *A. O. U. Check-list. N. Amer. B.* p. 265 (1886); *Cory, Auk,* iii. p. 211 (1886).

Ammodromus sandwichensis bryanti, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 354 (1885).

Ammodromus sandwichensis alaudinus, *Ridgw. op. cit.* vi. p. 350 (1883); *id. op. cit.* viii. p. 354 (1885); *A. O. U. Check-list N. Amer. B.* p. 266 (1886); *Everm. Auk,* iii. p. 182 (1886); *Seton, t. c.* p. 323.

Ammodromus beldingi, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 354 (1885); *A. O. U. Check-list N. Amer. B.* p. 266 (1886); *Everm. Auk,* iii. p. 182 (1886).

Adult male in breeding-plumage. General colour above streaked, brown with a rufous tinge, all the feathers with broad centres of blackish brown, those of the mantle and upper back with conspicuous white margins to the inner web; scapulars conspicuously rufous externally; lesser wing-coverts uniform reddish brown; median and greater coverts blackish, edged rather broadly with rufous, the margins whitish; bastard-wing dusky blackish; primary-coverts and quills dusky blackish, edged with paler brown, inclining to hoary whitish on the margins of the primaries, the secondaries externally rufous and margined with white like the greater coverts; upper tail-coverts like the back and rump, with broad black centres to the feathers; tail-feathers dusky brown, margined with ashy brown; crown of head like the back, blackish on the forehead and sides of crown, the centre with a whitish streak down the centre, caused by the light edges to the feathers; hind neck rather more ashy brown; lores, eyelid, and a streak above the eye pale yellow, the latter becoming white above the ear-coverts; ear-coverts pale rufescent brown, with a black spot behind and a broad black line along the lower margin; cheeks dull white, followed by a black malar line; throat white; fore neck and breast white, spotted with triangular marks of dark brown, tinged with rufous; abdomen uniform white; sides of body and flanks white, rather broadly streaked with black, the stripes laterally rufescent; thighs rufous-brown; under tail-coverts white; under wing-coverts and axillaries ashy, the edge of the wing slightly washed with yellow; quills below

dusky, ashy along the inner edge: "bill pale brown beneath, dusky above; feet light flesh-colour; iris brown" (*Audubon*). Total length 5 inches, culmen 0·4, wing 2·7, tail 1·9, tarsus 0·8.

Adult female. Not different from the male in plumage. Total length 4·5 inches, culmen 0·4, wing 2·65, tail 1·75, tarsus 0·8.

During the breeding-season the plumage becomes much abraded, the light edges being worn off. This is especially the case with the rufous margins to the wing-feathers. The black streaks on the underparts are strongly developed, and form a more or less well-defined spot in the centre of the breast.

The *winter plumage* is altogether browner than the summer plumage, and the under surface is more fulvescent, all the markings of the body being obscured by pale margins.

Young in first autumn plumage. Similar to the adults, but strongly washed with yellow on the eyebrow and even over the entire crown; cheek-stripe and sides of face ochreous buff; throat also spotted with black as well as the fore neck, which is pale ochreous buff.

In a female procured on the 16th May there is still some of the yellow tinge on the crown remaining, as well as some of the tiny black spots on the throat.

Like Messrs. Salvin and Godman, I have been unable to find definite characters for the different races into which *P. sandwichensis* has been divided, as they all seem to merge into one another. Eastern specimens (*P. savanna*) are darker than western ones, and have more rufous on the wing; but this depends a great deal on the season of the year. Western specimens are greyer and less distinctly streaked below, the streaks not extending so far on the breast and being blacker and more defined. Individuals from the high north are often larger, and some from California are extremely dark. More than one of these races were collected by Mr. Gaumer in the islands of the Bay of Honduras, and altogether there does not seem to be more variation in the species than is seen in the Meadow-Pipit of Europe (*Anthus pratensis*). As many of the differences in a series of the latter species are known to be caused by variation in the time of breeding, migration, and nesting-locality, the same may be found to be the case with the *Passerculi* of North America. I have failed to find in the series at my disposal the definite characters laid down by American authors; and I have come to the conclusion that under the heading of *P. sandwichensis* there is only one variable species, the divisions between the races not being in any way definable. That size is not a character to be relied upon is shown by the measurements of the series in the Museum, of which I subjoin the length of wing:—

2·45 inches.—California; Cozumel Island.
2·50 inches.—Cozumel.
2·55 inches.—British Columbia; N. Mexico.
2·60 inches.—District of Columbia; British Columbia; Cozumel.
2·65 inches.—District of Columbia; Indiana; Saskatchewan district; Nebraska; Utah; Nevada; California; Mexico; Cozumel.

2·70 inches.—Illinois; British Columbia; California; Oaxaca; Mexico; Jolbox Island.
2·75 inches.—Massachusetts; British Columbia; Mexico.
2·80 inches.—Repulse Bay; New York; Vancouver Island; S. Mexico; Guatemala.
2·85 inches.—Unalaska; Utah.
2·90 inches.—Connecticut; Vancouver Island; British Columbia; Colorado; California.
2·95 inches.—Unalaska; Fort Simpson; British Columbia; San Juan Island.
3·0 inches.—British Columbia; San Juan Island.

Hab. The whole of North America, varying considerably in size with locality; Mexico to Guatemala and islands of Cozumel and Jolbox; Bahamas.

a, b. Ad. st.	North America.	J. J. Audubon, Esq. [P.].
c. Ad. sk.	Repulse Bay, Arctic America.	Dr. Rae [P.].
d. ♀ ad. sk.	Unalaska, June 9, 1873 (*W. H. Dall*; Sm. no. 65469).	Salvin-Godman Coll.
e, f. Ad. sk.	Unalaska.	
g. Ad. sk.	La Pierre's House, Saskatchewan district.	B. R. Ross, Esq.
h. Ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
i, k, l, m, n. Ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
o, p. Ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
q, r. ♂ ad. sk.	S. Juan Island.	Dr. Lyall [P.].
s. ♂ ad. sk.	Vancouver Island, April 28 (*A. Forrer*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Vancouver Island, May 4 (*A. Forrer*).	Salvin-Godman Coll.
u. ♀ ad. sk.	Hyde Park, Illinois, May 16, 1883.	H. K. Coale, Esq. [P.].
v. ♀ ad. sk.	Indiana, Oct. 14, 1878 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
w. Ad. sk.	New York (*J. Bell*).	Sclater Coll.
x. ♂ ad. sk.	Portland, Connecticut, April 18, 1883 (*C. H. Neff*).	H. K. Coale, Esq. [P.].
y. ♂ ad. sk.	Massachusetts (*H. W. Henshaw*; Sm. no. 63311).	U.S. Nat. Museum [P.].
z–a'. ♂ ♀ ad. sk.	District of Columbia, April (*E. Coues*; Sm. nos. 28996, 29013).	Salvin-Godman Coll.
b'. ♀ ad. sk.	District of Columbia, April 21, 1861 (*E. Coues*; Sm. no. 85007).	U.S. Nat. Museum.
c'. Ad. sk.	Nebraska (*Dr. Hayden*; Sm. no. 8968).	Sclater Coll.
d'. ♂ ad. sk.	Tremont County, Colorado, June 17, 1879 (*C. K. Worthen*).	H. K. Coale, Esq. [P.].

e'. ♂ ad. sk.	Fort Bridger, Utah, May 29, 1858 (*C. Drexler*; Sm. no. 11107).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Fort Bridger, Utah, June 20, 1858 (*C. Drexler*; Sm. no. 11116).	Salvin-Godman Coll.
g'. Imm. sk.	Nevada, Sept. 1868 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
h'. Imm. sk.	California.	Lord Walsingham [P.].
i'. ♂ ad. sk.	Agua Caliente, California, March 28, 1881 (Sm. no. 76294).	R. B. Sharpe, Esq. [P.].
k'. ♂ ad. sk.	National City, San Diego, California (*B. T. Gault*).	R. B. Sharpe, Esq. [P.]
l'. Ad. st.	California.	Purchased.
m'. Ad. sk.	California.	Sclater Coll.
n'. Ad. sk.	N. California.	Sclater Coll.
o'. ♂ ad. sk.	Haywards', California, Feb. 10, 1881 (*W. O. Emerson*).	R. B. Sharpe, Esq. [P.].
p'. Ad. sk.	N. Mexico (*Ward*).	Sclater Coll.
q'. Ad. sk.	Mexico.	Sclater Coll.
r'. ♂ ad. sk.	Mexico (*A. Sallé*).	Sclater Coll.
s'. Ad. sk.	South Mexico (*A. Boucard*).	Salvin-Godman Coll.
t'. Ad. sk.	Oaxaca (*A. Boucard*).	Sclater Coll.
u'–y'. Ad. sk.	Cozumel Island, Jan. 1886 (*G. F. Gaumer*).	Salvin-Godman Coll.
z. Ad. sk.	Jolbox Island, Dec. 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.
a. Ad. sk.	Dueñas, Guatemala, Jan. 1860 (*O. S.*).	Salvin-Godman Coll.

2. Passerculus princeps.

Passerculus princeps, *Maynard, Amer. Nat.* vi. p. 637 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 540 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 178 (1881); *Coues, Check-list N. Amer. B.* p. 52 (1882); *id. Key N. Amer. B.* 2nd ed. p. 361 (1884); *Dutcher, Auk*, i. p. 31 (1884); *Merriam, t. c.* p. 390; *Dutcher, Auk*, ii. p. 36 (1885); *Sennett, Auk*, iii. p. 135 (1886); *Jones, t. c.* p. 136; *Dutcher, t. c.* p. 441.

Ammodromus princeps, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 354 (1885); *A. O. U. Check-list N. Amer. B.* p. 265 (1886).

Adult male in winter plumage. General colour above ashy grey, the mantle and upper back streaked with blackish brown, washed with rufous, the edges of some of the mantle-feathers greyish white; lower back and rump not so strongly streaked; lesser wing-coverts ashy brown; median and greater coverts blackish, edged externally with pale rufous, whitish at the ends; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy brown, inclining to whity brown on the primaries, the inner secondaries rufous on the outer webs and at the ends, with a broad white margin; upper tail-coverts ashy brown, broadly centred with black; tail-feathers dusky brown, edged with hoary grey; crown of head ashy, streaked

with black centres to the feathers, the centre of the crown with a broad streak of ashy white, formed by the light edges to the feathers; hind neck purer ashy grey; lores dull ashy, surmounted by a narrow eyebrow of greyish white; eyelid whitish; ear-coverts pale ashy, with a blackish mark behind and separated from the cheeks by an indistinct blackish line; cheeks white, as also the throat, divided from the cheeks by a malar line of black; remainder of under surface of body white, the fore neck and chest streaked with rufous-brown, blackish along the shafts of the feathers, those in the middle of the chest so broadly edged with rufous as almost to form a median patch; breast and abdomen uniform; sides of body and flanks streaked with blackish like the chest; thighs pale brown; under tail-coverts white, the long ones centred with black; under wing-coverts and axillaries white, with a slight tinge of yellow along the edge of the wing; quills below dusky, ashy along the inner edge. Total length 5·7 inches, culmen 0·45, wing 3, tail 2·3, tarsus 0·8.

Adult female. Similar to the male. Total length 5·5 inches, culmen 0·45, wing 3·05, tail 2·2, tarsus 0·8.

Hab. Atlantic coast of North America, from Nova Scotia south, in winter, to Virginia (*A. O. U. Check-list, l. c.*).

a. ♂ ad. sk.	Long Island, New York, Dec. 1883 (*W. Dutcher*; Sm. no. 93092).	U.S. Nat. Museum [P.].
b. Ad. sk.	Long Island, Dec. 29, 1883 (*Dr. A. K. Fisher*).	Sclater Coll.
c, d. ♂; *e, f, g.* ♀ ad. sk.	Duxbury, Massachusetts, Nov. 1884 (*M. Chamberlain*).	H. K. Coale, Esq. [P.].
h, i. ♂ ♀ ad. sk.	Duxbury, Nov. 1883 (*M. Chamberlain*).	R. B. Sharpe, Esq. [P.].

3. Passerculus rostratus.

Emberiza rostrata, *Cass. Proc. Philad. Acad.* 1852, p. 184.

Ammodromus rostratus, *Cass. Ill. B. Calif.* p. 226, pl. 38 (1855); *A. O. U. Check-list N. Amer. B.* p. 266 (1886).

Passerculus rostratus, *Coues, Ibis*, 1866, p. 268; *id. Key N. Amer. B.* p. 136 (1872); *Baird, Brewer, & Ridgw. Hist. B. N. Amer.* i. p. 542, pl. 24. fig. 12 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 178 (1881); *Belding, op. cit.* v. p. 537 (1883), vi. p. 343 (1883); *Coues, Check-list N. Amer. B.* p. 52 (1882); *id. Key N. Amer. B.* 2nd ed. p. 363 (1884); *Brewst. Auk*, ii. p. 198 (1885); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 382 (1886).

Passerculus guttatus, *Lawr. Ann. Lyc. N. Y.* viii. p. 473 (1866); *Coues, Key N. Amer. B.* p. 136 (1872); *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 2, 178 (1881); *Coues, Check-list N. Amer. B.* p. 52 (1882); *Ridgw. Proc. U.S. Nat. Mus.* v. p. 528 (1883).

Zonotrichia rostrata, *Gray, Hand-l. B.* ii. p. 95, no. 7412 (1870).

Zonotrichia guttata, *Gray, t. c.* p. 95, no. 7413 (1870).

Ammodromus rostratus guttatus, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-list N. Amer. B.* p. 267 (1886).

Adult male. General colour above uniform ashy brown, the feathers of the mantle and back with concealed dusky centres; lesser wing-coverts rather more reddish brown, obscured by ashy; median and greater coverts blackish, externally reddish brown, with isabelline margins; bastard-wing, primary-coverts, and quills dusky brown, margined with isabelline, ashy on the primaries and more rufous on the inner secondaries; upper tail-coverts like the back; tail-feathers dark brown, edged with isabelline; crown of head dull ashy brown, streaked with blackish centres to the feathers; lores, feathers round eye, eyelid, and a narrow eyebrow ashy whitish; ear-coverts pale ashy brown, dark brown along the upper and lower margins, forming a broad streak on the latter; cheeks and throat buffy white, with a narrow malar line of blackish; remainder of under surface of body dull whitish, the lower throat, fore neck, and breast thickly streaked with broad dark brown centres to the feathers; abdomen uniform whitish; sides of body and flanks isabelline brown, streaked with dark brown; thighs isabelline brown; under tail-coverts white; under wing-coverts and axillaries pale ashy isabelline; quills below ashy, isabelline along the inner edge. Total length 5 inches, culmen 0·55, wing 2·15, tail 1·9, tarsus 0·85.

P. guttatus I have united to *P. rostratus*, as, according to Mr. Ridgway, it "only rests on its more slender bill."

Hab. California, south, in winter, to Cape S. Lucas and North-western Mexico.

a. ♂ ad. sk.	Cape S. Lucas, Sept. 8, 1859 (*J. Xantus*; Sm. no. 29457).	Salvin-Godman Coll.

4. Passerculus bairdi.

Emberiza bairdi, *Audub. B. Amer.* 8vo, vii. p. 359, pl. 500 (1843); *Gray, Hand-l. B.* ii. p. 116, no. 7733 (1870).

Coturniculus bairdi, *Bp. Consp.* i. p. 481 (1850).

Centronyx bairdi, *Baird, N. Amer. B.* p. 441 (1858); *Coues, Key N. Amer. B.* p. 135 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 531, pl. 25. fig. 3 (1874); *Coues, B. N.-West*, p. 125 (1874); *Hensh. Rep. Expl. 100th Par.* p. 253 (1875); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 178 (1881); *Brewster, Auk*, iii. p. 198; *Seton, t. c.* p. 268.

Passerculus bairdi, *Coues, Amer. Nat.* vi. p. 637 (1872); *id. Bull. U.S. Geol. Surv.* iv. p. 585 (1878); *id. Check-list N. Amer. B.* p. 51 (1882); *id. Key N. Amer. B.* 2nd ed. p. 361 (1884).

Centronyx ochrocephalus, *Aitken, Amer. Nat.* vii. p. 237 (1873); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 235 (1881).

Ammodromus bairdi, *A. O. U. Check-list N. Amer. B.* p. 267 (1886); *Seton, Auk*, iii. p. 323 (1886).

Adult male in breeding-plumage. General colour above streaked, the feathers black in the centre, with a slight rufous tinge, and edged with whity brown; rump and upper tail-coverts rufous, with black centres to the feathers, less pronounced than on the mantle; lesser wing-coverts sandy rufous; median and greater coverts blackish, edged with rufous, whitish towards the ends, the greater

series with ashy; bastard-wing blackish, edged with white; primary-coverts and quills blackish brown, edged with ashy, the outer primary externally whitish, the secondaries margined with rufous, the inner ones with white; tail-feathers dusky brown, edged with whity brown; crown of head pale tawny rufous, blackish on the forehead and along the sides of the crown; lores and a tolerably distinct eyebrow creamy white; feathers round eye whitish; ear-coverts isabelline, with a blackish line along the upper and lower margins and a black patch behind; cheeks isabelline, with a tolerably distinct malar line of black; throat and under surface of body pale sandy buff, white on the breast and abdomen; fore neck spotted with triangular marks of black; sides of body and flanks streaked with black; thighs brown, white on the inner side; under tail-coverts white; under wing-coverts and axillaries white, the lower ones with an isabelline tinge; quills below ashy, more isabelline along the inner edge. Total length 5 inches, culmen 0·5, wing 2·85, tail 1·95, tarsus 0·8.

Adult female. Similar in colour to the male. Total length 4·8 inches, culmen 0·45, wing 2·6, tail 1·8, tarsus 0·8.

Young. Lark-like. General aspect similar to that of the adults; all the feathers fringed with whitish; no distinct band down the crown, this part being broadly streaked with black; under surface of body more sandy buff, and rather more thickly streaked than in the adults.

Hab. Interior of North America, from the plains of the Red River and Saskatchewan south to Texas, New Mexico, and Arizona (*A. O. U. Check-list, l. c.*).

a. Ad. sk.	49th Parallel, June 12, 1874 (*G. Dawson*).	N. A. Boundary Comm. [P.].
b, c. ♂ ad. sk.	West of Pembina, Dakota, July 1873 (*Dr. E. Coues*; Sm. nos. 65729, 65732).	Sclater Coll.
d. Juv. sk.	West of Pembina, July 15, 1873 (*E. Coues*; Sm. no. 65737).	Salvin-Godman Coll.
e. Ad. sk.	West of Pembina, July 15, 1873 (*E. Coues*; Sm. no. 65691).	U. S. Nat. Museum [P.].
f. ♂ ad. sk.	East of Turtle Mountain, July 28, 1873 (*E. Coues*; Sm. no. 65704).	Salvin-Godman Coll.
g. Ad. sk.	Souris River, Aug. 13, 1873 (*E. Coues*; Sm. no. 65721).	Sclater Coll.
h. ♀ ad. sk.	Souris River, Aug. 13, 1873 (*E. Coues*; Sm. no. 65708).	Salvin-Godman Coll.
i. Juv. sk.	Souris River, Aug. 13, 1873 (*E. Coues*; Sm. no. 65709).	U.S. Nat. Museum [P.].
k. Ad. sk.	Crittenden, Arizona, Sept. 2, 1874 (*H. W. Henshaw*).	R. B. Sharpe, Esq. [P.].
l. ♂ ad. sk.	Crittenden, Aug. 24, 1874 (*H. W. Henshaw*; Sm. no. 72319).	Salvin-Godman Coll.

72. AMMODROMUS *.

Type.

Ammodromus, *Swains. Zool. Journ.* iii. p. 348 (1827).. A. caudacutus.
Coturniculus, *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838) ..... A. passerinus.

Range. North America, excepting the high north, through Central America and the whole of South America, excepting the extreme southern parts; West India Islands.

Key to the Species.

a. Edge of wing yellow.
  a'. Breast and fore neck broadly streaked with black.
    a''. A yellow loral spot; eyebrow ashy; cheeks whitish ..... } *maritimus*, p. 683. / *nigrescens*, p. 685.
    b''. Lores, eyebrow, and cheeks tawny .... *caudacutus*, p. 685.
    c''. Eyebrow ashy olive, yellowish above the lores; cheeks pale sandy buff; upper tail-coverts rufous, streaked with black *henslowi*, p. 690.
  b'. Breast and fore neck uniform.
    d''. With a supraloral spot of yellow or orange.
      a'''. With rufous on the back; no yellow on the fore part of the cheeks.
        a^4. Eyebrow grey; sides of face sandy brown; mesial streak on crown sandy buff ..... *savannarum*, p. 687.
        b^4. Eyebrow ashy grey, as also the sides of the face; centre of crown ashy grey, streaked with black .... *manimbe*, p. 691.
      b'''. With no rufous on the back; fore part of cheeks yellow ..... *peruanus*, p. 693.
    e''. With no yellow on the lores; head and back brown, streaked with black..... *petenicus*, p. 694.
b. Edge of wing white ..... *lecontii*, p. 695.

1. Ammodromus maritimus.

Fringilla maritima, *Wils. Amer. Orn.* iv. p. 68, pl. 34. fig. 2 (1811); *Audub. B. Amer.* pl. 93; *id. Orn. Biogr.* i. p. 470 (1831).
Ammodromus maritimus, *Swains. Classif. B.* ii. p. 289 (1837); *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Audub. Syn.* p. 110 (1839); *id. B. Amer.* iii. p. 103, pl. 172 (1841); *Gray, Gen. B.* ii. p. 374 (1849); *Bp. Consp.* i. p. 482 (1850); *Cab. J. f. O.* 1856, p. 67; *Baird, B. N. Amer.* p. 454 (1858); *Scl. Cat. Amer. B.* p. 116 (1862); *Gray, Hand-l. B.* ii. p. 96, no. 7416 (1870); *Allen, Bull. Mus. C. Z.* ii. p. 279 (1871); *Coues, Key N. Amer. B.* p. 138 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 560,

* The connection between *Ammodromus* and *Coturniculus* appears to be complete, and the American naturalists also unite *Passerculus*. The latter seems to me to be a fairly distinct genus or subgenus.

pl. 25. fig. 8 (1874); *Maynard, B. East. N. Amer.* p. 121 (1878); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 17 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Coues, Check-l. N. Amer. B.* p. 53 (1882); *id. Key N. Amer. B.* 2nd ed. p. 367 (1884); *N. T. Lawrence, Auk*, ii. p. 272 (1885); *Cory, Auk*, iii. p. 213 (1886); *A. O. U. Check-list N. Amer. B.* p. 269 (1886).

Fringilla macgillivrayi, *Audub. B. Amer.* pl. 355; *id. Orn. Biogr.* ii. p. 285 (1834), iv. p. 394 (1838), v. p. 499 (1839).

Ammodromus macgillivrayi, *Audub. Syn.* p. 110 (1839); *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *id. Consp.* i. p. 482 (1850); *Audub. B. Amer.* iii. p. 106, pl. 173 (1841); *Gray, Gen. B.* ii. p. 374 (1849); *Bp. Consp.* i. p. 482 (1850).

Fringilla (Ammodromus) maritima, *Nutt. Man.* 2nd ed. p. 592 (1840).

Fringilla (Ammodromus) macgillivrayi, *Nutt. t. c.* p. 593 (1840).

Adult male in breeding-plumage. General colour above dull ashy brown with an olive tinge, the feathers of the mantle and back mottled with blackish centres, which are edged with paler ashy; lower back and rump more uniform, the blackish centres being less distinct; lesser wing-coverts dull olive yellowish; median and greater coverts dark brown, with blackish centres, and edged with rufescent brown; bastard-wing blackish, fringed with whity brown; primary-coverts and quills dusky brown, edged with olive, the secondaries margined with rufescent brown; upper tail-coverts like the back; tail-feathers dusky brown, edged with olive; crown of head dark ashy grey, slightly washed with olive, with a few blackish streaks on the sides of the hinder crown; lores ashy white, surmounted by a line of bright yellow; feathers round eye dark ashy like the ear-coverts, which have a faint superior line of olive along the crown; cheeks ashy whitish, followed by a broad malar streak of ashy grey; throat white; sides of neck dull ashy; fore neck and chest whitish, broadly streaked with ashy grey and slightly washed with sandy buff; lower breast and abdomen dull white; sides of body and flanks ashy brown, inclining to clear brown, and broadly streaked with dusky brown; thighs brown; under tail-coverts pale brown, broadly streaked with black; under wing-coverts and axillaries ashy brown, the edge of the wing bright yellow; quills below dusky brown, ashy along the inner edge: "bill dark brown above, light blue beneath; feet and claws greyish blue" (*Audubon*); iris hazel. Total length 5·5 inches, culmen 0·6, wing 2·55, tail 2·1, tarsus 0·9.

Adult female. Similar to the male. Total length 5·5 inches, culmen 0·55, wing 2·25, tail 1·8, tarsus 0·85.

Young birds have the markings much more distinct, and closely resemble *A. caudacutus*, though larger. They will most readily be distinguished by the absence of the fulvous superciliary stripe. (*B., B., & R.*)

Hab. Salt marshes of the Atlantic coast, from Massachusetts southward, and along the Gulf coast to the Rio Grande (*A. O. U. Check-list, l. c.*).

a. Ad. st.	North America.	Purchased.
b. Ad. sk.	North America (*Cassin*).	Sclater Coll.
c. ♂ ad. sk.	Point Judith, Rhode Island, May 29, 1879 (*C. W. Chamberlain*).	H. K. Coale, Esq. [P.].
d. ♂ ad. sk.	Point Judith, May 29, 1879 (*C. W. C.*).	R. B. Sharpe, Esq. [P.].
e. ♀ ad. sk.	Madison, Connecticut, June 17, 1869 (*Rev C. M. Jones*; Sm. no. 58198).	U.S. Nat. Museum [P.].
f. ♂ ad. sk.	Cape May, New Jersey, May 1839 (Sm. no. 25255).	Salvin-Godman Coll.
g. ♀ ad. sk.	Cape May, June 1840 (Sm. no. 25253).	Salvin-Godman Coll.
h. Ad. sk.	New Jersey.	J. J. Audubon, Esq. [P.].
i. ♂ ad. sk.	Fort Macon, North Carolina, April 15, 1869 (*E. Coues*; Sm. no. 55540).	U.S. Nat. Museum [P.].

2. Ammodromus nigrescens.

Ammodromus maritimus, var. nigrescens, *Ridgw. Bull. Essex Inst.* v. p. 198 (1873).

Ammodromus melanoleucus, *Maynard, B. East. N. Amer.* p. 119 (1878).

Ammodromus nigrescens, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *A. O. U. Check-list N. Amer. B.* p. 269 (1886).

Ammodromus maritimus nigrescens, *Coues, Check-l. N. Amer. B.* p. 53 (1882); *id. Key N. Amer. B.* 2nd ed. p. 268 (1884).

Adult. Brownish black above, the outer edges of the dorsal feathers narrowly whitish; beneath pure white, thickly streaked everywhere with black; supraloral spot and bend of wing bright yellow. Wing 2·40, tail 2·45, culmen 0·45, tarsus 0·90, middle toe 0·60.

Hab. Salt Lake, Southern Florida.

3. Ammodromus caudacutus.

Sharp-tailed Oriole, *Lath. Gen. Syn.* i. pt. 2, p. 448 (1782); *Penn. Arctic Zool.* ii. p. 261 (1785).

Oriolus caudacutus, *Gm. Syst. Nat.* i. p. 394 (1788).

Fringilla caudacuta, *Wils. Amer. Orn.* iv. p. 70, pl. 34. fig. 3 (1811); *Audub. B. Amer.* pl. 149; *id. Orn. Biogr.* ii. p. 281 (1834), v. p. 499 (1839).

Passerina caudacuta, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 25 (1817).

Ammodromus caudacutus, *Swains. Classif. B.* ii. p. 289 (1837); *Jard. ed. Wils. Amer. Orn.* ii. p. 70, pl. 35. fig. 3; *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Gray, Gen. B.* i. p. 374 (1849); *Bp. Consp.* i. p. 482 (1850); *Baird, B. N. Amer.* p. 453 (1858); *Scl. Cat. Amer. B.* p. 116 (1862); *Coues, Key N. Amer. B.* p. 138 (1872); *Maynard, B. East. U.S.* p. 122; *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 557, pl. 25. fig. 7 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 368 (1884); *A. O. U. Check-list N. Amer. B.* p. 268 (1886).

Fringilla littoralis, *Nutt. Man.* i. p. 504 (1832).

Ammodromus caudacutus, var. nelsoni, *Allen, Proc. Bost. Soc. N. H.* xvii. p. 292 (1875).

Ammodromus caudacutus nelsoni, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Brewster, Auk,* ii. p. 216 (1885); *Fisher, t. c.* p. 306; *Goss, Auk,* iii. p. 115 (1886); *Hensh. t. c.* p. 486; *A. O. U. Check-l. N. Amer. B.* p. 269 (1886).

Ammodromus caudacutus subvirgatus, *Dwight, Auk,* iv. p. 233 (1887).

Adult male in breeding-plumage. General colour above dark ashy brown, the mantle-feathers edged with dull white and centred with black; lower back and rump uniform; lesser wing-coverts ashy brown, washed with olive-yellow; median and greater coverts dusky brown or blackish, with paler brown margins; bastard-wing, primary-coverts, and quills dusky brown, edged with ashy brown, slightly rufescent on the inner secondaries and inner greater coverts; upper tail-coverts like the back; tail-feathers dusky brown, edged with ashy brown; crown of head and hind neck dull ashy brown, washed with warmer brown, and blackish along the sides of the crown; lores, eyelid, and a broad eyebrow pale orange-rufous; ear-coverts and feathers below the eye dull ashy; cheeks pale orange-rufous, followed by a narrow malar line of black; throat and under surface of body dull white, the fore neck and breast streaked with blackish; lower breast and abdomen uniform; sides of body and flanks dull brown, washed with sandy buff, and broadly streaked with black; thighs brown; under tail-coverts isabelline buff; under wing-coverts and axillaries dull whitish, the edge of the wing yellow; quills below dusky, ashy along the inner edge: "bill brownish black above, sides of upper mandible yellow; lower mandible light bluish grey; iris hazel; feet pale brown" (*Audubon*). Total length 4·8 inches, culmen 0·5, wing 2·15, tail 1·9, tarsus 0·75.

Young. Everywhere much more tawny than the adult, from which it is quite different in aspect. General colour above clear brown; the feathers of the mantle and back narrowly streaked with black and pale sandy buff on their margins; hind neck uniform brown; wing-coverts and quills as in the adults, but with more distinct pale margins, which are conspicuously sandy buff on the coverts and on the inner secondaries; crown of head blackish, the feathers slightly edged with sandy buff, more distinctly on the centre of the crown, where there is a tolerably defined pale streak; a distinct eyebrow of sandy buff; ear-coverts pale sandy buff, dusky blackish along the upper margin and behind, a narrow line of black separating the ear-coverts from the cheeks; cheeks and under surface of body uniform sandy buff, excepting for a few narrow shaft-lines of black on the sides of the fore neck and flanks, a little broader on the sides of the upper breast.

The series of Sharp-tailed Finches in the Museum is evidently incomplete, so that an exact comparison of the three races now recognized by American ornithologists has been impossible. To judge of the merits of these distinctions, it would be necessary to have a much fuller series of all of them procured at all seasons than is at my disposal at present. Mr. Dwight (*l. c.*) makes out a very good case for the recognition of three races; but he admits great

variation, as, for instance, when the "bills of the three forms intergrade;" and, again, certain specimens "suggest the inquiry whether some inland marshes may not furnish a regular supply of connecting links between *A. nelsoni* and the new race" (*A. subvirgatus*). Hence I have for the present united them all under one heading.

Hab. Salt marshes of Eastern North America, and the freshwater marshes of the Mississippi-valley region.

a. Ad. sk.	North America.	Purchased.
b. Ad. sk.	North America.	Salvin-Godman Coll.
c. Ad. sk.	Pennsylvania (*Cassin*).	Sclater Coll.
d. Juv. sk.	Point Judith, Rhode Island, Sept. 5, 1876 (*F. T. Jencks*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Oyster Bay, Long Island, July 14, 1875 (*Roosevelt*).	U.S. Nat. Mus. [P.].
f. Ad. sk.	Scarborough, Maine, Oct. 29, 1879.	H. K. Coale, Esq. [P.].
g. ♂ ad. sk.	Revere, Massachusetts, Oct. 18, 1879 (*H. M. Spelman*).	R. B. Sharpe, Esq. [P.].
h. ♀ ad. sk.	Cambridge, Massachusetts, Oct. 5 (*H. W. Henshaw*; Sm. no. 63340).	Salvin-Godman Coll.
i. Ad. st.	North America.	Purchased.

4. Ammodromus savannarum.

The Savanna Bird, *Sloane, Nat. Hist. Jamaica*, ii. p. 306, tab. 259. fig. 3 (1725).

Le Moineau de la Jamaïque, *Briss. Orn.* iii. p. 99 (1760).

Savanna Finch, *Lath. Gen. Syn.* ii. pt. i. p. 270 (1783).

Fringilla savannarum, *Gm. Syst. Nat.* i. p. 921 (1788).

Fringilla passerina, *Wils. Amer. Orn.* iii. p. 76, pl. 24. fig. 5 (1811); *Audub. B. Amer.* pl. 130; *id. Orn. Biogr.* ii. p. 180 (1834), v. p. 497 (1839).

Fringilla (Spiza) passerina, *Bp. Obs. Wils.* no. iii. (1825).

Ammodromus limaculatus, *Swains. Phil. Mag.* new ser. i. p. 435 (1827); *Gray, Gen. B.* ii. p. 374 (1849); *Bp. Consp.* i. p. 482 (1850); *Gray, Hand-l. B.* ii. p. 96, no. 7418 (1870).

Emberiza passerina, *Jard. ed. Wils. Amer. Orn.* i. p. 365, pl. 24. fig. 5 (1832); *Audub. Syn.* p. 103 (1839); *id. B. Amer.* 8vo, iii. p. 79, pl. 162 (1841); *Giraud, B. Long Isl.* p. 103 (1844); *Lembeye, Av. Cuba*, p. 56 (1850).

Coturniculus passerinus, *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Cab. J. f. O.* 1856, p. 6; *Baird, B. N. Amer.* p. 450 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 15 (1858); *Scl. & Salv. Ibis*, 1859, p. 18; *Scl. P. Z. S.* 1859, p. 379; *Cab. J. f. O.* 1860, p. 411; *Scl. Cat. Amer. B.* p. 116 (1862); *March, Proc. Philad. Acad.* 1863, p. 298; *Dresser, Ibis*, 1865, p. 487; *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868); *Frantz. J. f. O.* 1869, p. 301; *Sumichr. Mem. Bost. Soc.* i. p. 552 (1869); *Cooper, B. Calif.* p. 189 (1870); *Allen, Bull. Mus. Comp. Zool. Cambr.* iii. pp. 136, 177 (1872); *Coues, Key N. Amer. B.* p. 137 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 553, pl. 25. fig. 4 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874); *Coues, B. N.-West*, p. 131 (1874); *Gundl. Orn. Cuba*, p. 90 (1876); *Lawr. Bull. U.S. Nat. Mus.* iv.

p. 21 (1876); *Merrill, Proc. U.S. Nat. Mus.* i. p. 126 (1878); *Sennett, Bull. U.S. Geol. Surv.* v. p. 390 (1879); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Salvin, Cat. Strickl. Coll.* p. 233 (1882); *Coues, Check-list N. Amer. B.* p. 52 (1882); *id. Key N. Amer. B.* 2nd ed. p. 365 (1884); *Bicknell, Auk*, i. p. 330 (1884); *Salvin, Ibis*, 1885, p. 190; *Cory, List B. West Indies*, p. 13 (1885); *Merriam, Auk*, ii. p. 63 (1885); *Ayersb. t. c.* p. 280; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 384 (1886).

Coturniculus tixicrus, *Gosse, B. Jamaica*, p. 242 (1847); *Scl. P. Z. S.* 1861, p. 74; *id. Cat. Amer. B.* p. 116 (1862); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873).

Fringilla (Coturniculus) passerina, *Bryant, Proc. Bost. Soc. N. H.* x. p. 254 (1866); *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.* 1869, p. 597.

Ammodromus passerinus, *Gray, Hand-l. B.* ii. p. 96, no. 7420 (1870).

Ammodromus tixicrus, *Gray, t. c.* p. 96, no. 7423 (1870).

Coturniculus passerinus, var. pallidus, *Ridgw. in Coues, Key N. Amer. B.* p. 137 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 556 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 257 (1874); *Ridgw. Rep. Orn.* 40*th Parallel*, p. 467 (1877).

Coturniculus passerinus, β. pallidus, *Coues, B. N.-West*, p. 131 (1874).

Coturniculus savannarum, *A. & E. Newton, Handb. Jamaica*, p. 104 (1881); *Cory, Auk*, iii. p. 212 (1886).

Ammodromus savannarum passerinus, *Ridgw. Auk*, ii. p. 371 (1885); *Brewst. Auk*, iii. p. 107 (1885); *Fox, t. c.* p. 317; *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-list N. Amer. B.* p. 267 (1886); *Cory, Auk*, iii. p. 212 (1886).

Coturniculus passerinus perpallidus, *Coues, Check-list N. Amer. B.* p. 52 (1882); *id. Key N. Amer. B.* 2nd ed. p. 366 (1884).

Ammodromus savannarum perpallidus, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 335 (1885); *A. O. U. Check-l. N. Amer. B.* p. 268 (1886).

Adult male in winter plumage. General colour above mottled with black and rufous; the mantle and upper back black, with a terminal spot of rufous, most of the feathers externally creamy white; lower back and rump ashy grey, the feathers broadly tipped with rufous, with a subterminal black spot; lesser wing-coverts olive-yellow; median and greater coverts ashy grey or ashy brown towards the base, subterminally black, edged and tipped with greyish white, with a rufous spot in the centre of the tip of the feathers; bastard-wing blackish, edged with greyish white; primary-coverts blackish, edged with ashy brown; quills blackish, the primaries edged with ashy brown, washed with olive towards the base and whitish towards the ends; the inner secondaries rufous near the base of the outer web, subterminally blackish, with an indentation of white near the end of the outer web, the tip and base browner; upper tail-coverts black, edged with ashy grey and subterminally rufous; tail-feathers pointed, blackish, edged with ashy grey, with an oblique pattern of pale ashy near the end of the outer web; crown of head black, the feathers edged with ashy; along the centre of the crown a broad streak of creamy-buff feathers centred with black; hind neck ashy, mottled with rufous; lores and feathers round eye ashy white, surmounted by a narrow line of yellow, continued into a narrow eyebrow of pale ashy; ear-coverts, cheeks,

throat, and fore neck light ochreous brown, with a half-concealed blackish spot behind the ear-coverts; sides of neck grey, mottled with rufous like the hind neck; breast and abdomen white: sides of body and flanks pale ochreous brown, faintly streaked with dull rufous-brown; thighs whitish, with black bases; under tail-coverts isabelline buff; under wing-coverts and axillaries ashy whitish, the former tinged with yellow; edge of wing bright yellow; quills below dusky, ashy along the inner web: "bill flesh-coloured beneath, dusky above; feet light flesh-colour; iris dark brown" (*Audubon*). Total length 5 inches, culmen 0·4, wing 2·5, tail 1·8, tarsus 0·75.

Adult female. Similar in plumage to the male. Total length 4·6 inches, culmen 0·5, wing 2·3, tail 1·75, tarsus 0·8.

In the *breeding-plumage* all trace of the rufous markings on the upper surface becomes obliterated, and an ashy shade overspreads the mantle and back, the greater coverts being conspicuously ashy grey on the outer web; the under surface of the body becomes very dingy, and the buff colour of the throat and breast is scarcely perceptible; the bill is blackish horn-colour, instead of reddish brown (in skin).

Young. Resembles the adult, but is mottled with narrow white edges to the feathers, the greater coverts and inner secondaries being margined with white; the under surface of the body is whitish, tinged with ochreous buff on the lower throat, fore neck, and chest, which parts are streaked with blackish brown.

Hab. Eastern United States and Southern Canada to the plains, south to Florida, Cuba, Porto Rico, and coast of Central America. A paler race (*A. perpallidus*, Ridgw.) inhabits the Western United States from the Plains to the Pacific Coast.

a. Ad. st.	North America.	Purchased.
b. Ad. sk.	North America.	Sclater Coll.
c. Juv. sk.	Providence, Rhode Island, Aug. 8, 1876 (*H.K.Coale*).	R. B. Sharpe, Esq. [P.]
d. ♂ ad. sk.	District of Columbia, July 26, 1859 (*E. Coues*; Sm. no. 29477).	Salvin-Godman Coll.
e. ♂ ad. sk.	Englewood, Illinois, July 24, 1878 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
f. ♂ ad. sk.	Riverside, Illinois, July 4, 1877 (*H. K. C.*)	H. K. Coale, Esq. [P.].
g. ♀ ad. sk.	Riverside, July 4, 1877 (*H. K. C.*)	R. B. Sharpe, Esq. [P.].
h. ♀ ad. sk.	Hyde Park, Illinois, June 28, 1875 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Indiana (*R. Ridgway*).	U.S. Nat. Museum [P.].
k. ♂ ad. sk.	Crittenden, Arizona, July 15, 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
l, *m*. ♂ ♀ ad. sk.	Mt. Graham, Arizona, Sept. 22, 1873 (*H. W. Henshaw*; Sm. nos. 66875, 66877).	Salvin-Godman Coll.
n. Juv. sk.	Arizona (*H. W. Henshaw*; Sm. no. 69498).	Salvin-Godman Coll.
o. ♀ ad. sk.	Gainesville, Texas, June 25, 1884 (*G. H. Ragsdale*).	H. K. Coale, Esq. [P.].

p. ♂ ad. sk.	Corpus Christi, Texas, March 20, 1884 (*G. F. Morcom*).	H. K. Coale, Esq. [P.].
q. ♂ ad. sk.	Shawnee Mission, K.T., July 3, 1857 (*J. G. Cooper*; Sm. no. 8184).	Salvin-Godman Coll.
r. Ad. sk.	Jalapa, S. Mexico (*de Oca*).	Salvin-Godman Coll.
s. Ad. sk.	Guatemala (*Constancia*).	Sclater Coll.
t. Ad. sk.	Guadelupe Sakluk, Guatemala, April 1862 (*O. S.*).	Salvin-Godman Coll.
u. Ad. sk.	Coban, Vera Paz, Nov. 1859 (*O. S.*).	Salvin-Godman Coll.
v. Ad. sk.	Guatemala.	Salvin-Godman Coll.
w. Ad. sk.	Cozumel Island (*C. J. E. Devis*).	Salvin-Godman Coll.
x. Ad. sk.	Cozumel Island, Jan. 1886 (*G. F. Gaumer*).	Salvin-Godman Coll.
y. Ad. sk.	North side of Porto Rico (*G. Latimer*; Sm. no. 39572).	Salvin-Godman Coll.
z. Ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.]. (Type of *A. tixicrus*.)
a'. Ad. sk.	Jamaica.	P. H. Gosse, Esq. [C.].
b', c'. Ad. sk.	Jamaica (*Osburn*).	Sclater Coll.
d'. ♀ ad. sk.	Jamaica (*Osburn*).	Salvin-Godman Coll.
e', f'. Ad. sk.	Jamaica (*March*).	Sclater Coll.
g'. ♂ ad. sk.	Spanishtown, Jamaica, April 2, 1861 (*W. T. March*; Sm. no. 24388).	U.S. Nat. Museum [P.].

5. Ammodromus henslowi.

Emberiza henslowi, *Audub. B. Amer.* pl. 70; *id. Orn. Biogr.* i. p. 360 (1831), v. p. 498 (1839); *id. B. Amer.* 8vo, iii. p. 75, pl. 143 (1841); *Giraud, B. Long Isl.* p. 104 (1844).

Coturniculus henslowi, *Bp. Comp. List B. Eur. & N. Amer. B.* p. 32 (1838); *id. Consp.* i. p. 481 (1850); *Baird, B. N. Amer.* p. 451 (1858); *Scl. Cat. Amer. B.* p. 116 (1862); *Gray, Hand-l. B.* ii. p. 96, no. 7422 (1870); *Allen, Bull. Mus. Comp. Zool.* ii. p. 279 (1871); *Coues, Key N. Amer. B.* p. 137 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 550, pl. 25. fig. 5 (1874); *Coues, B. N.-West*, p. 133 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Coues, Check-list N. Amer. B.* p. 53 (1882); *id. Key N. Amer. B.* 2nd ed. p. 366 (1884); *Loomis, Auk*, ii. p. 190 (1885).

Ammodromus henslowi, *Gray, Gen. B.* ii. p. 374 (1849); *A. O. U. Check-list N. Amer. B.* p. 268 (1886); *Fox, Auk*, iii. p. 317 (1886).

Adult male in breeding-plumage. General colour above rufous, the feathers of the back and mantle with broad black centres and a few remains of ashy-grey margins; lower back and rump more uniform sandy brown, the black centres to the feathers less pronounced; lesser wing-coverts olive-brown; median and greater coverts rufous, with black centres to the feathers, the latter series with ashy margins; bastard-wing dusky brown, with ashy-whitish margins; primary-coverts dusky, edged with olive-brown; quills dusky brown, edged with ashy olive, more distinctly ashy towards the ends of the primaries, the first of which is externally whitish, the secondaries rufous along the outer webs; upper tail-coverts dull rufous, edged with ashy and centred with black; tail-feathers

dusky brown, edged with whity brown, the two centre ones rufous, blackish down the centre; crown of head pale olive-brown, with a black stripe along the sides of the crown, leaving a pale streak down the centre; nape and hind neck greenish olive-brown, spotted with black in the centre of the feathers; lores dull whitish, surmounted by an eyebrow of pale ashy olive-brown; feathers round eye dull whitish; ear-coverts pale ashy olive-brown, with a blackish patch behind; cheeks also pale ashy olive-brown, with a narrow black streak on their upper and lower margins; throat and under surface of the body dull whitish; sides of neck greenish olive-brown; fore neck and chest minutely spotted with black; breast and abdomen whiter; sides of body and flanks fulvous brown, rather more broadly streaked with black; thighs fulvescent externally, whitish on the inner side; under tail-coverts fulvescent; under wing-coverts and axillaries white, edged with olive-yellow, brighter on the outer edge of the wing; quills below ashy, whiter along the inner edge. Total length 4·4 inches, culmen 0·5, wing 2·25, tail 1·8, tarsus 0·6.

Adult female. Similar in plumage to the male. Total length 4·5 inches, culmen 0·5, wing 2, tail 1·85, tarsus 0·6.

Hab. Eastern United States, west to the Plains, north to Southern New England and Ontario (*A. O. U. Check-list, l. c.*).

a. Ad. sk.	North America.	Sclater Coll.
b. ♂ ad. sk.	Richland Co., Illinois, May 25, 1883 (*R. Ridgway*; Sm. no. 90737).	U.S. Nat. Museum [P.].
c. ♀ ad. sk.	Richland Co., May 25, 1883 (*R. Ridgway*; Sm. no. 90736).	Salvin-Godman Coll.
d. ♂ ad. sk.	Fox Prairie, Illinois, June 8, 1871 (*R. Ridgway*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Tollestone, Indiana, July 4, 1881 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].

6. Ammodromus manimbe.

Manimbe, *Azara, Apunt.* i. p. 525, no. 141 (1802).
Fringilla manimbe, *Licht. Verz. Doubl.* p. 25 (1823); *Neuwied, Beitr. Naturg. Bras.* iii. p. 600 (1831).
Emberiza manimbe, *D'Orb. & Lafr. Rev. Zool.* 1837, p. 77.
Ammodromus xanthornus, *Gould in Darw. Voy. 'Beagle,' Birds*, pl. 30 (1841).
Ammodromus manimbe, *Gould, ut suprà*, p. 90 (1841); *Hartl. Ind. Azara*, p. 10 (1847); *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 96, no. 7421 (1870).
Coturniculus manimbe, *Bp. Consp.* i. p. 481 (1850); *Cab. Mus. Hein.* Th. i. p. 133 (1850); *Burm. Th. Bras.* iii. p. 228 (1856); *id. Reis. La Plata-St.* ii. p. 486 (1861); *Scl. Cat. Amer. B.* p. 116 (1862); *Pelz. Orn. Bras.* pp. 230, 439 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Salvin, Ibis*, 1885, p. 216.

Adult male in winter plumage. General colour above ashy grey, the feathers of the mantle and back broadly streaked with black, the black streaks edged laterally with rufous; rump more uniform ashy, with scarcely any black centres to the feathers; lesser wing-coverts olive-yellow, brighter yellow on the edge of the wing;

median and greater coverts black, edged with ashy grey, whitish at the ends, the inner ones slightly tinged with rufous; bastard-wing and primary-coverts dusky, edged with ashy; quills dusky brown, edged with ashy brown, inclining to hoary whitish on the margins of the primaries, the first of which is edged with dull white, the secondaries with rufous; upper tail-coverts ashy, centred with black and washed with rufous; tail-feathers dusky brown, edged with ashy brown, inclining to hoary whitish on the middle ones; crown of head clear ashy grey, broadly streaked with black centres to the feathers; hind neck clear ashy grey, more minutely spotted with black; lores dull white, surmounted by a line of yellow, extending into an eyebrow of pale ashy; feathers round eye dull whitish; ear-coverts and sides of face ashy, with a black line above the ear-coverts and a black spot behind them; cheeks and throat ashy whitish; sides of neck ashy grey, streaked with black; lower throat and fore neck ashy isabelline; breast and abdomen white; sides of body and flanks brown, as also the thighs; under tail-coverts pale isabelline; under wing-coverts and axillaries ashy whitish, those near the edge of the wing bright yellow; quills below dusky, ashy along the inner edge: "bill greyish brown, reddish white at the base of the under mandible, blackish on the tip; feet pale fleshy brown; iris yellowish brown" (*Neuwied*). Total length 5 inches, culmen 0·45, wing 2·4, tail 2·1, tarsus 0·7.

In the *breeding-plumage* the rufous on the upper surface entirely disappears, excepting on the inner secondaries; the general colour of the head and back is ashy grey, streaked with black.

Young birds are altogether browner than the adults, have the fore neck and chest streaked with blackish, and the wing-coverts and inner secondaries with very pale edges.

I can detect no differences in specimens from various localities, beyond the fact that those from British Guiana are of a duller brown on the fore neck and sides of body; but I have not been able to compare breeding specimens from this locality with others from Brazil.

Hab. The greater part of South America, from Guiana, Venezuela, and Colombia to S. Brazil and Bolivia.

a. ♂ ad. sk.	Bogotá, U. S. Colombia (*Crowther*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Caracas, Venezuela, Aug. 1867 (*A. Goering*).	Salvin-Godman Coll.
c. Imm. sk.	Trinidad.	Purchased.
d, e. ♂ ♀ ad. sk.	Roraima, British Guiana, Dec. 1881 (*H. Whitely*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad.; *h.* ♂ juv. sk.	Roraima, Nov. 1881 (*H. W.*).	Salvin-Godman Coll.
i. ♂ juv. sk.	Roraima, May 1883 (*H. W.*).	Salvin-Godman Coll.
k. ♂ juv. sk.	Roraima, June 23, 1883 (*H. W.*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Roraima, Nov. 10, 1881 (*H. W.*).	Sclater Coll.
m. ♀ juv. sk.	Roraima, Nov. 14, 1881 (*H. W.*).	Sclater Coll.
n. Juv. sk.	Cayenne.	Sclater Coll.

o. ♂ ad. sk.	Island of Mexiana, Lower Amazons, Dec. 1848 (*A. R. Wallace*).	Salvin-Godman Coll.
p, q. Ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.
r. Ad. sk.	Pernambuco (*W. A. Forbes*).	Sclater Coll.
s. Ad. st.	Brazil.	Admiral Fitzroy [P.].
t, u. Ad. sk.	Bahia, Brazil (*Dr. Wucherer*).	Salvin-Godman Coll.
v, w. Ad. sk.	Brazil.	Sclater Coll.
x. Ad. sk.	Brazil.	M. Claussen [P.].
y. ♂ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
z. Ad. sk.	Maldonado.	Admiral Fitzroy [P.]. (Type of *A. xanthornus*.)
a'. Ad. sk.	Monte Video.	Admiral Fitzroy [P.].
b'. ♂ ad. sk.	Quilmeo, Buenos Ayres, Dec. 1872 (*W. H. Hudson*).	Sclater Coll.
c'. ♂ ad. sk.	Quilmeo, April 1873 (*W. H. Hudson*).	Sclater Coll.
d'. ♂ ad. sk.	Cosquin, Cordova, Arg. Rep., Sept. 22, 1882 (*E. W. White*).	Salvin-Godman Coll.
e'. Ad. sk.	Bolivia.	T. Bridges, Esq. [C.].

7. Ammodromus peruanus.

Coturniculus peruanus, *Bp. Consp.* i. p. 481 (1850); *Scl. P. Z. S.* 1858, p. 455; *id. & Salv. P. Z. S.* 1866, p. 182; *iid. P. Z. S.* 1867, pp. 750, 977; *iid. P. Z. S.* 1873, p. 264; *iid. Nomencl. Av. Neotr.* p. 32 (1873); *Tacz. P. Z. S.* 1874, p. 521, 1882, p. 17; *id. Orn. Pérou*, iii. p. 43 (1886).

Ammodromus peruanus, *Gray, Hand-l. B.* ii. p. 96, no. 7424 (1870).

Adult male. General colour above brown, tinged with olive, the feathers of the back rather broadly streaked with blackish brown; rump uniform ashy brown; lesser wing-coverts olive-yellow; median and greater coverts dark brown, edged with lighter brown and tinged with olive, rather ashy on the margins; bastard-wing like the greater coverts; primary-coverts and quills dark brown, edged with olive-yellow, the secondaries with reddish brown, whitish on the margins of the inner ones; upper tail-coverts and tail-feathers dark brown, edged with ashy brown, the latter slightly tinged with olive on the edges; crown of head brown, the feathers centred with dark brown and strongly washed with olive-yellow, brighter towards the forehead; hind neck a little more ashy; lores and a line above the eye bright yellow; feathers round eye as well as the fore part of the cheeks yellow; ear-coverts and hinder cheeks ashy brown; throat and under surface of body ashy whitish, tinged with yellow on the chin; the fore neck and chest pale ashy brown; breast and abdomen whiter; sides of body and flanks pale ashy brown; thighs ashy, tinged with olive-yellow; under tail-coverts white, with a slight yellow tinge; under wing-coverts and axillaries pale yellow, brighter along the edge of the wing; quills below dusky, ashy along the inner edge: "bill horn-colour, lower mandible whitish; feet clear flesh-colour; iris dark brown" (*Jelski*). Total length 5 inches, culmen 0·55, wing 2·4, tail 1·85, tarsus 0·85.

Adult female. Similar to the male. Total length 4·5 inches, culmen 0·5, wing 2·2, tail 1·6, tarsus 0·8.

Young. Differs from the adults in being much browner, tinged with rufous on the crown, which has an indication of a pale median ashy streak; edges of wing-coverts and of quills rufescent, the median and greater coverts pale sandy buff at the ends; an ashy-whitish line above the eye; sides of face pale isabelline; throat white; rest of under surface pale sulphur-yellow, streaked with small triangular blackish spots on the fore neck and breast.

Hab. Upper Amazonia, Peru, and Bolivia.

a. ♂ ad. sk.	Gualaquiza, Ecuador (*L. Fraser*).	Sclater Coll.
b. Ad. sk.	Ecuador.	L. Fraser, Esq. [C.].
c. Ad. sk.	Jima, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
d. Ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Cosnipata, Peru, Sept. 15, 1868 (*H. Whitely*).	Sclater Coll.
f. ♂ imm. sk.	La Merced, Peru, July 1876 (*H. W.*).	Sclater Coll.
g. Juv. sk.	Sarayacu, Upper Amazons, March 1877 (*H. W.*).	Sclater Coll.
h. Ad. sk.	Sarayacu, Upper Amazons, March 1877 (*H. W.*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Yurimaguas, Feb. 26, 1881 (*Stolzmann*).	Sclater Coll.
k. ♂ ad. sk.	Upper Ucayali, Sept. 5, 1865.	E. Bartlett, Esq. [C.].
l. ♂ ad. sk.	Lower Ucayali.	E. Bartlett, Esq. [C.].
m. ♂ ad. sk.	Nauta.	E. Bartlett, Esq. [C.].
n. Ad. sk.	Bolivia.	W. Bridges, Esq. [C.].
o. Ad. sk.	Bolivia (*Bridges*).	Sclater Coll.

8. Ammodromus petenicus.

Ammodromus petenicus, *Salvin, P. Z. S.* 1863, p. 189; *id. Ibis*, 1866, p. 193.
Coturniculus (?) petenicus, *Ridgw. Ibis*, 1884, p. 44.
Coturniculus petenicus, *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 384, pl. 28. fig. 2 (1886).

Adult female (type of species). General colour above blackish brown, the feathers streaked by means of ashy-brown margins, which have also a slight rufescent tinge, especially on the lower back and rump; lesser and median coverts dark brown, edged with ashy brown and slightly tinged with olive-yellow; greater coverts dark brown, edged with ashy brown, but with a strong subterminal rufous shade; bastard-wing and primary-coverts dark brown, edged with ashy whitish; quills dark brown, edged with ashy brown, the secondaries with dull rufous, like the inner greater coverts; upper tail-coverts like the rump; tail-feathers dark brown, edged with ashy, before which is a shade of rufous; crown of head like the

back; lores ashy whitish, produced into a distinct eyebrow of ashy grey; feathers round eye white; ear-coverts ashy brown, with a rufous streak along the upper edge; cheeks white, posteriorly ashy, like the ear-coverts, from which they are separated by a narrow line of black; throat white, with a thin malar line of blackish; fore neck and breast pale brown; lower breast and abdomen whiter; sides of body and flanks light brown, with a few blackish streaks on the latter; thighs brown; under tail-coverts pale fulvous-brown; under wing-coverts and axillaries ashy, washed with yellow externally, brighter on the edge of the wing; quills below dusky, ashy along the inner edge. Total length 5·1 inches, culmen 0·5, wing 2·2, tail 2, tarsus 0·75.

Hab. Guatemala.

a. ♀ ad. sk.	Pine ridge of Poctum, Guatemala, March 1862 (*O. S.*).	Salvin-Godman Coll. (Type of species.)

9. Ammodromus lecontei.

Emberiza lecontei, *Audub. B. Amer.* 8vo, viii. p. 221, pl. 488 (1843).
Ammodromus lecontei, *Gray, Gen. B.* ii. p. 374 (1849); *A. O. U. Check-list N. Amer. B.* p. 269 (1886); *Seton, Auk*, iii. p. 323 (1886); *Brewster, t. c.* p. 410; *Allen, t. c.* p. 489.
Coturniculus lecontei, *Bp. Consp.* i. p. 481 (1850); *Baird, B. N. Amer.* p. 452 (1858); *Gray, Hand-l. B.* ii. p. 96, no. 7425 (1870); *Coues, Key N. Amer. B.* p. 137 (1872); *id. Amer. Nat.* vii. p. 748 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* i. p. 552, pl. 25. fig. 6 (1874); *Coues, B. N.-West*, p. 134 (1874); *id. Bull. U.S. Geol. Surv.* p. 587 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Coues, Check-list N. Amer. B.* p. 53 (1882); *Seton, Auk*, ii. p. 23 (1885); *Loomis, t. c.* p. 190 (1885); *Agersb. t. c.* p. 280; *Widman, t. c.* p. 382.

Adult male in breeding-plumage. General colour above mottled, the feathers of the mantle and back black, edged with sandy buff or ashy whitish, with here and there a tinge of rufous; the lower back and rump more uniform sandy buff, the feathers mesially black and tinged with rufous, but not so pronounced as on the mantle; lesser wing-coverts uniform sandy brown; median and greater coverts blackish, broadly edged with rufous, the latter series sandy buff or ashy on the margins; bastard-wing blackish, edged with white; primary-coverts and quills dark brown, externally pale brown, the first primary edged with white; the inner secondaries like the back, with broad black centres and with more or less rufous before the ashy margins; upper tail-coverts sandy rufous, with black centres; tail-feathers dark brown, blackish in the centres and margined with ashy brown, before which is a rufous shade; crown of head blackish brown, the feathers with sandy-buff margins; along the centre of the crown a broad streak of ashy white; hind neck rather more ashy; lores white, surmounted by a broad eyebrow of orange-rufous: feathers round eye whitish; ear-coverts dark ashy grey, with a black patch near the hinder margin; cheeks orange-rufous; throat

and under surface of body paler orange-rufous; breast and abdomen white; sides of body and flanks pale orange-rufous, streaked with black, more broadly on the latter; thighs white, externally sandy buff; under tail-coverts pale sandy buff; under wing-coverts white; axillaries pale sandy buff; quills below dusky, isabelline along the inner edge. Total length 4·4 inches, culmen 0·4, wing 2·1, tail 1·9, tarsus 0·7.

Adult female. Similar to the male, but rather less richly coloured, and not quite so broadly streaked with black on the sides. Total length 4·5 inches, culmen 0·4, wing 2·15, tail 1·8, tarsus 0·7.

Hab. From the plains eastward to Illinois, South Carolina, and Florida, and from Manitoba south to Texas (*A. O. U. Check-list, l. c.*).

a. ♂ ad. sk.	Warsaw, Illinois, April 20, 1883 (*C. K. Worthen*).	R. B. Sharpe, Esq. [P.].
b. ♂ ad. sk.	Warsaw, May 12, 1883 (*C. K. Worthen*; Sm. no. 92053).	U.S. Nat. Museum [P.].
c. ♀ ad. sk.	Vimita, Indian Territory, Feb. 21, 1884 (*Colby*).	R. B. Sharpe, Esq. [P.].
d. Ad. sk.	Papillion, Nebraska, Oct. 15, 1882 (*L. Belding*; Sm. no. 88739).	Salvin-Godman Coll.
e. ♀ ad. sk.	Texas, Nov. 20, 1880 (*J. Douglas Ogilby*).	Sclater Coll.

73. MELOSPIZA.

Type.

Melospiza, *Baird, B. N. Amer.* p. 476 (1858) ..... M. fasciata.
Helospiza, *Baird, t. c.* p. 477 (1858) ..... M. lincolni.

Range. The whole of North America, ranging into Central America.

Key to the Species.

a. Chest uniform ashy grey, with no spots ..... *georgiana*, p. 697.
b. Chest spotted.
  a'. With a fulvescent band across the chest.... *lincolni*, p. 698.
  b'. Chest white, with triangular spots.
    a''. Wing not exceeding 2·6 inches ..... *fasciata* and allies, [pp. 701–705.
      a. Back very distinctly streaked with black, the feathers edged with grey, producing a strongly mottled appearance.
        a'. Streaks on fore neck black, with very distinct chestnut tinge ..... *fasciata*, p. 701.
        β'. Streaks on fore neck pale rufous; all colours paler than foregoing ..... *fallax*, p. 703.
        γ'. Streaks on fore neck black and very distinct, without rufous tinge .... *heermanni*, p. 704.
        δ'. Similar to the last, but smaller .... *samuelis*, p. 705.
      β. Streaks on back obsolete, the blackish centres indistinct and without ashy margins..... *guttata*, p. 706.
    b''. Size large; wing over 3 inches; streaks on back very indistinct; rump uniform . *cinerea*, p. 707.

1. Melospiza georgiana.

Fringilla georgiana, *Lath. Ind. Orn.* i. p. 460 (1790); *Nutt. Man.* p. 502 (1832).

Fringilla palustris, *Wilson, Amer. Orn.* iii. p. 49, pl. 22. fig. 1 (1811); *Audub. B. Amer.* pl. 64; *id. Orn. Biogr.* i. p. 331 (1831), v. p. 508 (1839).

Fringilla (Spiza) palustris, *Bp. Obs. Wils.* 1825, no. 105.

Zonotrichia palustris, *Jard. ed. Wils. Amer. Orn.* i. p. 338, pl. 21. fig. 1 (1832); *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 94, no. 7394 (1870).

Passerculus palustris, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *id. Consp.* i. p. 481 (1850).

Ammodromus palustris, *Audub. Syn.* p. 111 (1839); *id. B. Amer.* iii. p. 110, pl. 175 (1841); *Giraud, B. Long Isl.* p. 114 (1844).

Fringilla (Ammodromus) georgiana, *Nutt. Man. Orn.* p. 588 (1840).

Melospiza palustris, *Baird, B. N. Amer.* p. 483 (1858); *Scl. Cat. Amer. B.* p. 114 (1862); *Blakist. Ibis*, 1863, p. 79; *Lawr. Ann. Lyc. N. Y.* viii. p. 286 (1867); *Allen, Mem. Bost. Soc. N. H.* i. p. 505 (1868); *id. Bull. Mus. C. Z.* ii. p. 279 (1871), iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 138 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 34, pl. 28. figs. 1, 2 (1874); *Coues, B. N.-West*, p. 137 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 285 (1875); *Coues, Bull. U.S. Geol. Surv.* iv. p. 596 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 180 (1881); *Coues, Check-l. N. Amer. B.* p. 53 (1882); *id. Key N. Amer. B.* 2nd ed. p. 370 (1884); *Bicknell, Auk*, ii. p. 149; *Loomis, t. c.* p. 189; *Chadb. t. c.* pp. 216 381; *Agersb. t. c.* p. 280; *Bulley, Auk*, iii. p. 277 (1886).

Passerculus caboti, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* iii. pl. 46. fig. 9 (1874, *descr. nullâ*); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 235 (1881).

Melospiza georgiana, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-list N. Amer. B.* p. 281 (1886); *Fox, Auk*, iii. p. 318 (1886).

Adult male. General colour above brown, the feathers mesially streaked with black and edged with lighter brown, those on the mantle with whitish margins; lower back and rump light brown, with more or less concealed black centres to the feathers; wing-coverts chestnut, with a mesial black mark at the ends, much more pronounced on the greater series, which have a narrow edging of creamy white at the tips; bastard-wing blackish, margined with white; primary-coverts and quills brown, edged with rufous-brown, the first primary white along the outer margin, the secondaries externally chestnut; the innermost secondaries black, externally washed with chestnut, white towards the end of the outer web, thus resembling the greater coverts; upper tail-coverts rufous, with broad black central streaks; tail-feathers dusky brown, rufous on the edges, with black along the centre of the middle feathers; crown of head uniform bright chestnut; the forehead black, with a narrow median line of ashy fulvous; nape and hind neck clear slaty grey, streaked with black; lores white, continued into a broad eyebrow of pale ashy; eyelid white, as also the feathers below the eye; ear-coverts ashy brown, with whitish shaft-lines, and surmounted on the

hinder parts by a broad band of black, washed with chestnut; cheeks ashy white, with a well-marked superior line of black below the eye; throat pure white, as also the breast and abdomen; across the fore neck a shade of ashy; sides of upper breast washed with fulvous and streaked with black; sides of body, flanks, and under tail-coverts sandy brown, streaked with black; thighs uniform brown; under wing-coverts and axillaries ashy white, the former washed with fulvous; on the edge of the wing a faint shade of yellow; quills below dusky, ashy along the inner edge: "bill dark brown above, paler and tinged with blue beneath; feet yellowish brown; iris hazel" (*Audubon*). Total length 5·2 inches, culmen 0·5, wing 2·5, tail 2·2, tarsus 0·85.

Adult female. Similar to the male: "bill brown, the lower mandible lighter; feet yellow; iris brown" (*Roosevelt, MSS.*). Total length 5 inches, culmen 0·45, wing 2·55, tail 2·3, tarsus 0·85.

The *adults in winter plumage* only differ from the summer plumage in their darker tints, and in having the chestnut of the crown obscured by black streaks, with a distinct mesial line of ashy grey down the crown. The flanks are more uniform sandy brown. On many specimens there are dusky streaks on the fore neck, and these are probably young birds after their first moult.

Hab. Eastern North America to the Plains, accidentally to Utah, north to the British Provinces, including Newfoundland and Labrador. Breeds from the Northern States northward, and winters in the Middle States and southward. (*A. O. U. Check-list*, p. 281.)

a. Ad. sk.	North America (*Cassin*).	Sclater Coll.
b. ♂ ad. sk.	Grand Crossing, Cook Co., Illinois, May 23, 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. ♀ ad. sk.	Oyster Bay, Long Island, April 8, 1875 (*Roosevelt*; Sm. no. 86977).	U.S. Nat. Mus. [P.].
d, e. ♂ ♀ ad. sk.	Washington, D.C. (*C. Drexler*; Sm. nos. 28611, 28613).	Salvin-Godman Coll.
f. ♂ ad. sk.	New Orleans, Louisiana, Dec. 1, 1882 (*Dr. Shufeldt*; Sm. no. 90673).	Salvin-Godman Coll.
g. ♂ ad. sk.	New Orleans, Dec. 2, 1882 (*Dr. Shufeldt*; Sm. no. 90672).	U.S. Nat. Mus. [P.].
h. Ad. sk.	Pennsylvania (*Cassin*).	Sclater Coll.
i. ♀ ad. sk.	Frankford, Pennsylvania, Feb. 5, 1881 (*W. L. Collins*).	R. B. Sharpe, Esq. [P.].
h. ♂ ad. sk.	Bainbridge, Pennsylvania (*T. H. Bean*; Sm. no. 68898).	U.S. Nat. Mus. [P.].
l. ♀ ad. sk.	Across Eastern Branch, Maryland, May 1, 1860 (*E. Coues*; Sm. no. 85044).	U.S. Nat. Mus. [P.].

2. Melospiza lincolni.

Fringilla lincolni, *Audub. B. Amer.* pl. 193; *id. Orn. Biogr.* ii. p. 539 (1834).

Linaria lincolni, *Richards. List*, 1837 (*teste Coues*).

Passerculus lincolni, *Bp. Comp. List B. Eur. & N. Amer.* p. 33 (1838); *Scl. P. Z. S.* 1858, p. 303, 1859, p. 365; *Scl. & Salv. Ibis*, 1859, p. 18.

Peucæa lincolni, *Audub. Syn.* p. 113 (1839); *id. B. Amer.* iii. p. 116, pl. 117 (1841); *Bp. Consp.* i. p. 481 (1850).

Passerculus zonarius, *Bp. teste Scl. P. Z. S.* 1856, p. 305.

Zonotrichia lincolni, *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 94, no. 7393 (1870); *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 76 (1872).

Melospiza lincolni, *Baird, B. N. Amer.* p. 482 (1858); *Scl. P. Z. S.* 1859, p. 379; *id. Cat. Amer. B.* p. 114 (1862); *Blakist. Ibis*, 1862, p. 7, 1863, p. 79; *Dresser, Ibis*, 1865, p. 489; *Lawr. Ann. Lyc. N. Y.* viii. p. 286 (1866); *Coues, Proc. Philad. Acad.* 1866, p. 88; *Dall & Bann. Trans. Chicago Acad.* i. p. 285 (1869); *Sumichr. Mem. Bost. Soc.* i. p. 552 (1869); *Cooper, Orn. Calif.* p. 216 (1870); *Allen, Bull. Mus. C. Z.* iii. p. 177 (1872); *Coues, Key N.-Amer. B.* p. 138 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 31, pl. 27. fig. 13 (1874); *Coues, B. N.-West*, p. 135 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 283 (1875); *Ridgw. Rep. Surv.* 40*th Parallel*, p. 484 (1877); *Coues, Bull. U.S. Geol. Surv.* iv. p. 595 (1878); *Sennett, t. c.* p. 18, v. p. 390 (1879); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 26 (1881); *Coues, Check-l. N. Amer. B.* p. 53 (1882); *Boucard, P. Z. S.* 1883, p. 444; *Belding, Proc. U.S. Nat. Mus.* vi. pp. 348, 350 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 370 (1884); *Dutcher, Auk*, i. p. 31 (1884); *Drew, Auk*, ii. p. 16 (1885); *Beckh. t. c.* p. 142; *Agersb. t. c.* p. 280; *Scott, t. c.* p. 354; *Turner, Proc. U.S. Nat. Mus.* viii. p. 241 (1885); *Hensh. Auk*, iii. p. 74; *Seton, t. c.* p. 324; *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 386 (1886); *A. O. U. Check-list N. Amer. B.* p. 281 (1886).

Helospiza lincolni, *Allen, Proc. Essex Inst.* 1864, p. 72.

Adult male. General colour above brown, distinctly mottled with black centres to the feathers of the mantle and upper back, which are also slightly edged with ashy; the lower back and rump more ashy, and streaked with black down the centre of the feathers; scapulars like the back, but rufescent externally; lesser wing-coverts rufous-brown; median and greater coverts rufous-brown, ashy externally and toward the tips, where there is a broad central black mark, giving a spotted appearance; bastard-wing dusky, externally ashy grey, whitish towards the end; primary-coverts and quills dusky, externally rufescent brown, more ashy on the primary-coverts and primaries, the first of the latter being edged with whitish; the inner secondaries blackish, edged with rufous-brown like the rest of the wing, whitish on the extreme margin; upper tail-coverts rufescent brown, edged with ashy and centred with black; centre tail-feathers ashy brown, with dark centres, the remainder brown, externally edged with reddish brown, with a paler fringe to the tips of the feathers; crown of head grey down the centre, with a broad lateral band on each side, streaked with black, and one of rufous, followed by ashy-grey bands above the eye, skirting the sides of the head; hind neck brown like the back, but much more narrowly

streaked with black; lores and feathers at base of bill and in front of the eye ashy whitish: eyelid and ear-coverts fulvous-brown, the latter with paler shaft-streaks and rather dusky; cheeks pale fulvous, with a distinct black line along the upper edge; throat white, with numerous small triangular spots of black, forming below the cheeks a tolerably defined moustachial line; sides of neck ashy grey, streaked with black; fore neck and chest fulvescent, with slightly larger spots than the throat; breast and abdomen white; sides of body and flanks ashy brown, a little more fulvescent on the latter, both streaked with black; thighs brown; under tail-coverts buffy whitish, with broad blackish centres; under wing-coverts and axillaries whitish, with ashy bases, the edge of the wing pale yellow; quills below dusky, ashy along the inner edge: "bill dark brown at the end; greyish blue at the base; feet yellowish brown; iris brown" (*Audubon*). Total length 5·1 inches, culmen 0·4, wing 2·6, tail 2·5, tarsus 0·8.

Adult female. Similar to the male in colour, but with the bands on the head not so distinctly pronounced. Total length 5·3 inches, culmen 0·4, wing 2·45, tail 2·25, tarsus 0·7.

The *winter plumage* scarcely differs from the summer plumage, being merely a little more ashy above, and having the spots on the throat and chest a little less distinct.

Hab. North America at large, breeding chiefly north of the United States, and in the higher parts of the Rocky Mountains; south in winter to Guatemala. (*A. O. U. Check-list, l. c.*)

a, b. ♂ ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
c. Ad. sk.	Lake of Woods, Manitoba, July 20, 1873 (*G. Dawson*).	N.A. Boundary Commission.
d. Ad. sk.	Colville, British Columbia.	J. K. Lord, Esq. [P.].
e. ♀ ad. sk.	Colehour, Illinois, May 16, 1880.	R. B. Sharpe, Esq. [P.].
f. ♂ ad. sk.	Hyde Park, Cook Co., Ill., May 5, 1883.	H.K.Coale, Esq. [P.].
g. Ad. sk.	Pennsylvania (*S. F. Baird*).	Sclater Coll.
h. ♂ ad. sk.	Wheatland, Indiana, May 5, 1883 (*R. Ridgway*; Sm. no. 90313).	Salvin-Godman Coll.
i. Ad. sk.	Fort Laramie, Nebraska, Sept. 10 (*J. G. Cooper*; Sm. no. 37198).	Salvin-Godman Coll.
k. ♂ ad. sk.	Denver, Colorado, May 17, 1873 (*H. W. Henshaw*; Sm. no. 66947).	U.S. Nat. Mus. [P.].
l. Ad. sk.	Denver, May 17 (*H. W. Henshaw*; Sm. no. 66940).	U.S. Nat. Mus. [P.].
m. ♀ ad. sk.	Mount Graham, Arizona, Sept. 25 (*H. W. Henshaw*; Sm. no. 69595).	U.S. Nat. Mus. [P.].
n. ♀ ad. sk.	Tucson, Arizona.	H.K.Coale, Esq. [P.].
o. ♀ ad. sk.	Apache, Arizona, Oct. 7 (*H. W. Henshaw*: Sm. no. 68827).	Salvin-Godman Coll.
p. ♂ ad. sk.	Kendall Co., Texas, March 4, 1880 (*N. C. Brown*).	R. B. Sharpe, Esq.
q. Ad. sk.	California.	Old Collection.

r. ♂ ad. sk.	Cohuilla Valley, California, May 4, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
s. Ad. sk.	Presidio, Mexico, Jan. 9 (*A. Forrer*).	Salvin-Godman Coll.
t. Ad. sk.	Jalapa, Mexico (*de Oca*).	Salvin-Godman Coll.
u. Ad. sk.	Tamaulipas, Mexico.	J. Gould, Esq.
v. Ad. sk.	Orizaba, Mexico (*Botteri*).	Sclater Coll.
w, x. Ad. sk.	Guatemala (*J. U. Skinner*).	Gould Coll.
y. Ad. sk.	Guatemala (*O. Salvin*).	Salvin-Godman Coll.
z. ♀ ad. sk.	Savana of Poctum, Guatemala, March 1862 (*O. S.*).	Salvin-Godman Coll.

3. Melospiza fasciata.

Fasciated Finch, *Lath. Gen. Syn.* ii. pt. i. p. 273 (1783); *Penn. Arctic Zool.* ii. p. 375 (1785).

Fringilla fasciata, *Gm. Syst. Nat.* i. p. 922 (1788).

Fringilla melodia, *Wils. Amer. Orn.* ii. p. 125, pl. xvi. fig. 4 (1810); *Audub. B. Amer.* pl. 25; *id. Orn. Biogr.* i. p. 125 (1831), v. p. 507 (1839); *id. Syn.* p. 120; *id. B. Amer.* 8vo, iii. p. 147, pl. 189 (1841); *Giraud, B. Long Isl.* p. 121 (1844).

Emberiza ? melodia, *Jard. ed. Wils.* i. p. 269, pl. xvi. fig. 4 (1832).

Zonotrichia melodia, *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838); *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850); *Gray, Hand-l. B.* ii. p. 94, no. 7387 (1870).

Melospiza melodia, *Baird, B. N. Amer.* p. 477 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 16 (1858); *id. Ibis*, 1867, p. 270; *Allen, Bull. Mus. C. Z.* ii. p. 272 (1871), iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 139 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 19, pl. 27. fig. 6 (1874); *Coues, B. N.-West*, p. 138 (1874); *id. Bull. U.S. Geol. Surv.* iv. p. 596 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 127 (1878).

Melospiza fasciata, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 2, 180 (1881); *Coues, Check-l. N. Amer. B.* p. 53 (1882); *Merriam, Bull. U.S. Nat. Mus.* no. 25, p. 283 (1884); *Coues, Key N. Amer. B.* 2nd ed. p. 371 (1884); *Bicknell, Auk*, ii. p. 147 (1885); *Agersb. t. c.* p. 280; *A. O. U. Check-l. N. Amer. B.* p. 278 (1886); *Fox, Auk*, iii. p. 318 (1886); *Seton, t. c.* p. 324 (1886).

Melospiza fasciata montana, *Hensh. Auk*, i. p. 224 (1884); *Batchelder, Auk*, ii. pp. 124, 236 (1885); *A. O. U. Check-list N. Amer. B.* p. 279 (1886).

Melospiza montana, *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 387 (1886).

Adult male. General colour above brown, the mantle and upper back mottled with black centres to the feathers, which are broadly edged with ashy internally and with chestnut externally; lower back and rump more ashy brown, with the dark centres to the feathers more pronounced; scapulars like the back; lesser wing-coverts rufous-brown; median coverts dark brown, surrounded by rufous-brown, with the edges ashy; greater coverts rufous, ashy or creamy whitish at the tip, with large central spots of black near the ends, resembling the inner secondaries; bastard-wing blackish, externally rufous, ashy whitish at the ends; primary-coverts and quills blackish brown, externally rufous, whitish towards the end of the primaries, the inner secondaries black in the centre, surrounded by rufous, and with broad ashy grey margins; upper tail-coverts

reddish brown, edged with ashy grey, with longitudinal black centres; centre tail-feathers brown, with black along the shaft-region, the remainder brown, edged with pale reddish brown, the ends of the outer feathers paler; centre of crown ashy, streaked with black, and bordered on each side by a broad line of chestnut-brown, also streaked with black; hind neck a little more ashy than the mantle, and more narrowly streaked with black; lores, feathers in front of the eye, and a broad eyebrow creamy white, the latter washed with ashy posteriorly; feathers below the eye creamy white; ear-coverts ashy ochreous, with paler shaft-streaks, the upper edge chestnut, forming a streak; cheeks ochreous buff, separated from the ear-coverts by a chestnut streak; throat white, with scarcely any dusky triangular spots, bordered on each side by a broad malar streak of black, washed with chestnut; sides of neck ashy grey, narrowly streaked with dusky; fore neck and breast white, the latter tinged with rufous, all the feathers having broad triangular centres of black, bordered on each side with chestnut, the spots collected in the centre of the breast and forming a large patch; abdomen white; sides of body and flanks fulvescent, streaked with chestnut, the centres of the feathers black; thighs brown; under tail-coverts yellowish white with dusky centres; under wing-coverts and axillaries whitish, with ashy bases; quills below dusky, ashy rufous along their inner edge: "bill deep brown above, bluish beneath; feet and claws pale brown; iris hazel" (*Audubon*). Total length 5·5 inches, culmen 0·55, wing 2·6, tail 2·45, tarsus 0·85.

Adult female. Similar to the male. Total length 5·7 inches, culmen 0·55, wing 2·5, tail 2·5, tarsus 0·8.

The *summer plumage* is more rufous than the winter plumage, the ashy edges to the feathers becoming worn off, and the spots on the breast blacker by reason of the failing of the chestnut colour. The cheek-band also becomes purer white, losing the ochreous-buff tint of the winter plumage, while there is no trace whatever of dusky spots on the throat.

Specimens of *M. montana*, Henshaw, received from the U.S. National Museum under that name, appear to be absolutely inseparable from *M. fasciata*.

Hab. Eastern United States to the Plains, breeding from Virginia and the northern portion of the Lake States northward (*A. O. U. Check-list*, *l. c.*). *M. montana* is said to inhabit Colorado, Utah, Nevada, and northward.

a. Ad. sk.	Montreal, Canada (*P. L. S.*).	Sclater Coll.
b. Ad. sk.	Lake of Woods, Manitoba, July 6, 1873 (*G. Dawson*).	N.A. Boundary Commission.
c, *d*. Ad. sk.	49th Parallel, June 1873 (*G. Dawson*).	N.A. Boundary Commission.
e. Juv. sk.	Sheffield, Indiana, July.	R. B. Sharpe, Esq. [P.].
f. ♂ ad. sk.	Lake Forest, Illinois, April 30, 1877 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g. ♀ ad. sk.	Hyde Park, Illinois, April 30, 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].

h. ♂ ad. sk.	Hyde Park, Illinois, June 1875 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i, k, l, m. ♂ ad.; *n, o.* ♀ ad. sk.	Grand Crossing, Cook Co., Illinois, March 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
p, q. ♂ ad.; *r.* ♀ ad. sk.	Grand Crossing, April 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
s. ♂ ad. sk.	Colehour, Illinois, June 16, 1878 (*H. K. Coale*; Sm. no. 80754).	U.S. Nat. Mus. [P.].
t. Juv. sk.	Colehour, Illinois, Sept. 28 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
u. Juv. sk.	Halfday, Illinois, July 4.	H. K. Coale, Esq. [P.].
v. ♀ ad. sk.	Cook Co., Illinois, May 12, 1871 (*Greene Smith*; Sm. no. 77199).	U.S. Nat. Mus. [P.].
w. ♀ ad. sk.	Hall's Branch, D.C., March 2, 1860 (*E. Coues*; Sm. no. 29072).	Salvin-Godman Coll.
x. ♂ ad. sk.	District of Columbia, March 2, 1860 (*E. Coues*; Sm. no. 29064).	Salvin-Godman Coll.
y, z. Ad. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.
a'. Ad. sk.	District of Columbia, Feb. 15, 1875 (*L. Jouy*).	Salvin-Godman Coll.
b'. ♀ ad. sk.	Washington, D.C. (*G. Shoemaker*; Sm. no. 85664).	U.S. Nat. Mus. [P.].
c'. ♂ ad. sk.	Virginia, Dec. 28, 1881 (*G. Shoemaker*; Sm. no. 85666).	U.S. Nat. Mus. [P.].
d'. ♂ ad. sk.	Philadelphia (*P. L. S.*).	Sclater Coll.
e'. Juv. sk.	Fort Klamath, Oregon, Aug. 23, 1883 (*Capt. C. Bendire*; Sm. no. 94828).	U.S. Nat. Mus. [P.].
f'. Ad. sk.	Wyoming, Oct. 3, 1870 (Sm. no. 61091).	U.S. Nat. Mus. [P.].
g'. Ad. sk.	Pine Grove, Wyoming, Oct. 20, 1870 (Sm. no. 61043).	R. B. Sharpe, Esq. [P.].
h'. ♀ ad. sk.	Sacramento, California, March 2, 1873 (*G. L. Lansing*; Sm. no. 83625).	Salvin-Godman Coll.

Subsp. α. **Melospiza fallax.**

Zonotrichia fallax, *Baird, Proc. Philad. Acad.* 1854, p. 119; *Gray, Hand-l. B.* ii. p. 94, no. 7391 (1870).

Melospiza fallax, *Baird, B. N. Amer.* p. 481 (1858); *id. op. cit.* ed. 1860, p. 481, pl. 6. fig. 2; *Kenn. P. R. Rep.* x. pt. iv. p. 29, pl. 27. fig. 2 (1859); *Coues, Proc. Philad. Acad.* 1866, p. 88; *Baird, Ibis*, 1867, p. 270; *Cooper, B. Calif.* p. 215 (1870); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 388 (1886).

Melospiza melodia (*nec Wils.*), *Coues, Ibis*, 1865, p. 165 (*teste Coues*).

Melospiza melodia, var. fallax, *Coues, Key N. Amer. B.* p. 139 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 22, pl. 27. fig. 10 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 281 (1875).

Melospiza melodia, γ. fallax, *Coues, B. N.-West*, p. 139 (1874); *Ridgw. Rep. Surv.* 40*th Parallel*, p. 482 (1877); *id. Bull. Nutt.*

Orn. Club, iii. p. 66 (1878); *Belding, Proc. U.S. Nat. Mus.* i. p. 417 (1879).

Melospiza fasciata fallax, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 3, 180 (1881); *Coues, Check-l. N. Amer. B.* p. 54 (1882); *id. Key. N. Amer. B.* 2nd ed. p. 372 (1884); *Hensh. Auk*, i. p. 224 (1884); *Dihw. Auk*, ii. p. 16 (1885); *Beckh. t. c.* p. 141; *A. O. U. Check-l. N. Amer. B.* p. 279 (1886).

Adult male. Similar to *M. fasciata*, but very much paler; the grey and rufous tints accentuated, so that the moustache is clear rufous, as also are the spots on the fore neck and sides of the body, which are clear rufous, with scarcely any indication of black centres; the rump nearly uniform: "bill lilaceous ashy brown, darkest terminally, the lower mandible more lilaceous; rictus pale yellow; tarsi and toes dilute lilaceous-sepia, the latter pale yellow beneath; iris very dark sepia" (*Ridgway*). Total length 5·8 inches, culmen 0·5, wing 2·6, tail 2·6, tarsus 0·85.

Hab. New Mexico and Arizona.

a. ♂ ad. sk.	Fort Yuma, California, Dec. 5, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
b. Ad. sk.	Tucson, Arizona, April 1884 (*E. W. Nelson*; Sm. no. 98918).	R. B. Sharpe, Esq. [P.].
c. Ad. sk.	Tucson, Arizona, July 1884 (*E. W. Nelson*; Sm. no. 98908).	U.S. National Mus. [P.].

Subsp. β. Melospiza heermanni.

Melospiza heermanni, *Baird, B. N. Amer.* p. 478 (1858); *id.* ed. 1860, p. 478, pl. 70. fig. 1; *id. Ibis*, 1867, p. 270; *Cooper, B. Calif.* p. 212 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 388 (1886).

Melospiza gouldi (*nec Baird*), *Scl. P. Z. S.* 1862, p. 369.

Melospiza fallax (*nec Baird*), *Scl. P. Z. S.* 1864, p. 174.

? Melospiza pectoralis, *von Müll. Syst. Verz. Wirb. Mex.* p. 49.

Zonotrichia heermanni, *Gray, Hand-l. B.* ii. p. 94, no. 7389 (1870).

Melospiza melodia, var. heermanni, *Coues, Key N. Amer. B.* p. 139 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 24, pl. 27. fig. 9 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 282 (1875); *Cooper, Proc. U.S. Nat. Mus.* ii. p. 248 (1880).

Melospiza melodia, β. heermanni, *Coues, B. N.-West*, p. 139 (1874); *Ridgw. Rep. Surv.* 40*th Parallel*, p. 481 (1877); *id. Bull. Nutt. Orn. Club*, iii. p. 66 (1878); *Belding, Proc. U.S. Nat. Mus.* i. p. 417 (1879).

Melospiza fasciata heermanni, *Ridgw. Bull. U.S. Nat. Mus.* iii. pp. 3, 180 (1881); *Coues, Check-l. N. Amer. B.* p. 54 (1882); *id. Key N. Amer. B.* 2nd ed. p. 372 (1884); *Eeerm. Auk*, iii. p. 182 (1886); *A. O. U. Check-l. N. Amer. B.* p. 280 (1886).

Adult. Similar to *M. fasciata*, but altogether a darker bird and distinguished by the bold black spotting on the fore neck and breast, without any tinge of rufous; the spotting on the rump scarcely distinguishable: "upper mandible slaty horn-black, lower paler brownish slaty; tarsi and toes pale horn-colour; iris hazel" (*Ridgway*). Total length 5·6 inches, culmen 0·5, wing 2·45, tail 2·35, tarsus 0·85.

Mexican specimens are similar, but have a decidedly clearer white eyebrow.

Hab. "Interior of Southern California, east into Western Nevada," and south into Mexico (*cf. A. O. U. Check-l. l. c.*).

a. Ad. sk.	California (*Bell*).	Sclater Coll.
b. Ad. sk.	Stockton, California (*L. Belding*; Sm. no. 77325).	Salvin-Godman Coll.
c. ♀ juv. sk.	Haywards', California, July 10, 1881 (*W. O. Emerson*).	R. B. Sharpe, Esq. [P.].
d. ♀ juv. sk.	Santa Barbara, California, June 26, 1875 (*H. W. Henshaw*; Sm. no. 72273).	U. S. National Mus. [P.].
e. ♂ ad. sk.	Fort Tejon, Dec. (*J. Xantus*; Sm. no. 25735).	Salvin-Godman Coll.
f. Ad. sk.	California.	J. Gould, Esq.
g. Ad. sk.	California.	Purchased.
h. Ad. sk.	Mexico.	J. Gould, Esq.
i–k. Ad. et juv. sk.	Mexico.	Sclater Coll.
l. Ad. sk.	Mexico (*White*).	Sclater Coll.
m. Ad. sk.	South Mexico (*A. Boucard*).	Salvin-Godman Coll.
n. Ad. sk.	Puebla, Mexico, Jan. 1866 (*A. Boucard*).	Sclater Coll.
o. ♂ ad. sk.	Puebla, Jan. 1866 (*A. Boucard*).	Salvin-Godman Coll.

Subsp. γ. Melospiza samuelis.

Ammodromus samuelis, *Baird, Proc. Bost. Soc. N. H.* vi. p. 381 (1858); *id. B. N. Amer.* p. 455 (1858); *Cooper, B. Calif.* p. 191 (1870); *Gray, Hand-l. B.* ii. p. 96, no. 7417 (1870).

Melospiza gouldi, *Baird, B. N. Amer.* p. 479 (1850); *id. op. cit.* 2nd ed. p. 479, pl. 71. fig. 1 (1860).

Zonotrichia gouldii, *Gray, Hand-l. B.* ii. p. 64, no. 7390 (1870).

Melospiza melodia, var. gouldii, *Coues, Key N. Amer. B.* p. 139 (1872).

Melospiza melodia, var. samuelis, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 26, pl. 27. fig. 7 (1874).

Melospiza melodia, δ. gouldii, *Coues, B. N.-West*, p. 139 (1874).

Melospiza fasciata samuelis, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 3, 180 (1881); *Coues, Check-l. N. Amer. B.* p. 54 (1882); *Belding, Proc. U.S. Nat. Mus.* v. p. 528 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 372 (1884); *A. O. U. Check-l. N. Amer. B.* p. 280 (1886); *Everm. Auk*, iii. p. 182 (1886); *Hensh. t. c.* p. 453 (1886).

Adult. Similar to *M. heermanni*, but much smaller, and having the rump marked with blackish, though less distinctly than the back. Total length 5·3 inches, culmen 0·45, wings 2·25, tail 2·15, tarsus 0·75.

A perfect gradation in size and colour seems to take place between this race and *M. heermanni*.

Hab. California.

a. Ad. sk.	California.	Sclater Coll.
b. ♂ ad. sk.	San Bernardino, California, May 22, 1886 (*F. Stephens*)	G. Frean Morcom, Esq. [P.].

c. ♂ ad. sk.	Oaklands, Cal., Sept. 13, 1873 (*Dr. S. Bryant*).	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Presidio, San Francisco Co., Oct. 9, 1882 (*L. Locke*).	H. K. Coale, Esq. [P.].
e. ♂ ad. sk.	Nicasio, Cal., March 25, 1880.	H. K. Coale, Esq. [P.].
f. ♂ ad. sk.	Fort Tejon, Cal. (*Xantus*; Sm. no. 25733).	Sclater Coll.

Subsp. δ. Melospiza rufina.

Fringilla cinerea (*nec Gm.*), *Audub. B. Amer.* pl. 390. fig. 1; *id. Orn. Biogr.* v. p. 22 (1839); *id. Syn.* p. 119 (1839); *id. B. Amer.* 8vo, iii. p. 145, pl. 187 (1841).

Emberiza rufina, *Brandt, Descr. Av. Ross.* pl. 215 (1836).

Passerella cinerea (*nec Gm.*), *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838); *id. Consp.* i. p. 477 (1850).

Zonotrichia guttata, *Gambel, Journ. Philad. Acad.* i. p. 50 (1847); *Gray, Gen. B.* ii. p. 373 (1849).

Passerella rufina, *Bp. Consp.* i. p. 477 (1850).

Melospiza rufina, *Baird, B. N. Amer.* p. 480 (1858); *Brown, Ibis*, 1868, p. 422; *Dall & Bann. Trans. Chicago Acad.* i. p. 285 (1869); *Cooper, B. Calif.* p. 214 (1870); *Coues, Check-l. N. Amer. B.* p. 54 (1882).

Zonotrichia rufina, *Gray, Hand-l. B.* ii. p. 94, no. 7388 (1870).

Melospiza guttata, *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 43 (1873); *Coues, Check-l. N. Amer. B.* p. 54 (1882).

Melospiza cinerea (*nec Gm.*), *Finsch, t. c.* p. 41.

Melospiza melodia, var. guttata, *Coues, Key N. Amer. B.* p. 139 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 27, pl. 27. fig. 12 (1874).

Melospiza melodia, var. rufina, *Coues, Key N. Amer. B.* p. 139 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 27, pl. 27. fig. 11 (1874).

Melospiza melodia, *f.* guttata, *Coues, B. N.-West*, p. 139 (1874).

Melospiza fasciata, *g.* rufina, *Coues, t. c.* p. 139 (1874).

Melospiza fasciata, δ. guttata, *Ridgw. Rep. Surv. 40th Parallel*, p. 484 (1877); *id. Bull. Nutt. Orn. Club*, iii. p. 66 (1878); *Belding, Proc. U.S. Nat. Mus.* i. p. 417 (1879).

Melospiza fasciata guttata, *Ridgw. Bull. U.S. Nat. Mus.* iii. pp. 3, 180 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 372 (1884); *Anthony, Auk*, iii. p. 169 (1886); *Everm. t. c.* p. 182; *A. O. U. Check-list N. Amer. B.* p. 280 (1886).

Melospiza fasciata rufina, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 3, 180 (1881); *Bean, Proc. U.S. Nat. Mus.* v. pp. 152, 172 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 372 (1884); *Anthony, Auk*, iii. p. 169 (1886); *A. O. U. Check-list N. Amer. B.* p. 280 (1886).

Adult male. Differs from *M. fasciata* and its allies in the more uniform character of the upper parts, which are devoid of the ashy margins to the feathers; the streaks on the underparts dingy rufous, not standing out in the same bold relief as in *M. fasciata* or *M. heermanni*: "upper mandible horn-black, paler along tomium; lower horn-blue, darker terminally" (*Ridgway*): "bill dusky, lower mandible reddish brown towards the base; feet and claws dusky reddish brown" (*Audubon*). Total length 5·5 inches, culmen 0·5, wing 2·45, tail 2·4, tarsus 0·75.

In some of the specimens from British Columbia and Vancouver's Island the markings on the back are still more indistinct than in those from California, but a perfect gradation is found in some of the British-Columbian specimens; and I cannot separate the two forms *M. guttata* and *M. rufina*.

Hab. Pacific coast of North America from California to Sitka.

a. Ad. sk.	California (*Bell*).	Sclater Coll.
b. ♂ ad. sk.	Upper Klamath Lake, Oregon, Dec. 26 (*A. Forrer*).	Salvin-Godman Coll.
c, d. ♂ ♀ ad. sk.	Columbia River, Oregon, Oct. 1878 (*H. W. Henshaw*; Sm. nos. 77702, 77714).	U.S. Nat. Mus. [P.].
e. ♂ ad. sk.	Crooked River, Oregon, Sept. 22, 1878 (*H. W. Henshaw*; Sm. no. 77717)	U.S. Nat. Mus. [P.].
f. Ad. sk.	Western Territory (*Dr. G. Suckley*; Sm. no. 4540).	Salvin-Godman Coll.
g, h, i. Ad. sk.	British Columbia.	J. K. Lord, Esq. [C.].
k, l. Ad. sk.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].
m. ♀ ad. sk.	Vancouver Island, Jan. 29 (*A. Forrer*).	Salvin-Godman Coll.
n. Ad.; *o.* ♂ juv. sk.	Cypress Island.	Dr. Lyall [P.].
p. ♂ ad. sk.	Orcas Island.	Dr. Lyall [P.].

4. Melospiza cinerea.

Cinereous Finch, *Penn. Arctic Zool.* ii. p. 378 (1785); *Lath. Gen. Syn.* ii. pt. i. p. 274 (1783).

Fringilla cinerea, *Gm. Syst. Nat.* i. p. 922 (1788).

Zonotrichia cinerea, *Gray, Gen. B.* ii. p. 373 (1849); *Bp. Consp.* i. p. 478 (1850).

Melospiza insignis, *Baird, Trans. Chicago Acad.* i. p. 319, pl. 29. fig. 2 (1869); *Dall & Bann. t. c.* p. 285 (1869); *Finsch, Abhandl. nat. Ver. Brem.* iii. p. 44 (1872).

Zonotrichia insignis, *Gray, Hand-l. B.* ii. p. 94, no. 7392 (1870).

Melospiza melodia, var. insignis, *Coues, Key N. Amer. B.* p. 140 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 30, pl. 27. fig. 8 (1874).

Melospiza melodia, *b.* insignis, *Coues, B. N.-West*, p. 139 (1874).

Melospiza cinerea, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 3, 180 (1881); *Coues, Check-list N. Amer. B.* p. 54 (1882); *Nelson, Cruize R. S. 'Corwin,'* p. 72 (1883); *Bean, Proc. U.S. Nat. Mus.* v. pp. 154, 172 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 372 (1884); *Turner, Auk*, ii. p. 157 (1885); *A. O. U. Check-list N. Amer. B.* p. 281 (1886).

Adult male. General colour above nearly uniform ashy brown, the lower back and rump uniform, the mantle and back slightly mottled with mesial markings of dull rufous near the ends of the feathers; wing-coverts reddish brown, the rufous more decided on the greater coverts, which are dusky blackish near the ends of the inner web, which is fringed with white at the tips; bastard-wing dusky

brown, washed externally with ashy; primary-coverts and quills dusky brown, externally ashy brown, the first primary margined with whitish, the secondaries externally rufous, edged with white near the end of the outer web and round the tip; upper tail-coverts reddish brown, with a mesial black streak; tail-feathers brown, externally more reddish brown; crown of head slaty grey in the centre, with a broad lateral streak of reddish brown, slightly mottled with dusky bases; hind neck rather pale ashy; lores white, continued into a broad eyebrow of paler ashy grey; eyelid white; ear-coverts pale ashy, streaked on the fore part with white shaft-lines; a broad streak of rufous along the upper edge, and another along the upper border of the cheeks, which are white; throat also white, separated from the cheeks by a very broad malar line of blackish, washed with rufous; sides of neck ashy grey; fore neck and breast white, washed with ashy, all the feathers broadly centred with reddish brown; lower breast and abdomen pure white; sides of body and flanks ashy brown, more or less streaked with dusky reddish brown; thighs uniform reddish brown; under tail-coverts pale brown, broadly edged with white; under wing-coverts and axillaries pale ashy brown, with white edges, the lower coverts washed with fulvous; quills below dusky, ashy whitish along the inner edge. Total length 7·3 inches, culmen 0·7, wing 3·5, tail 3·2, tarsus 1·1.

Adult female. Not so strongly marked as the male, but otherwise similar. The malar line is not so pronounced and the throat shows small spots.

Young. Differs from the adult in being reddish brown, with paler edges to the feathers of the mantle and upper back, which are broadly streaked with black; the under surface is dull yellowish buff, washed with brown and closely streaked with black.

Hab. Aleutian and Prybilov Islands, and east to Fort Kenai, Alaska.

a, b. ♂ ♀ ad. sk.	Unalashka Island, Alaska (*L. M. Turner*; Sm. nos. 78917, 78920).	Salvin-Godman Coll.
c. ♂ ad. sk.	Unalashka Island, March 10, 1879 (*L. M. Turner*; Sm. no. 78907).	R. B. Sharpe, Esq. [P.].
d. Ad. sk.	Atkha Island (*L. M. Turner*; Sm. no. 85596).	U.S. Nat. Mus. [P.].
e. Juv. sk.; *f.* ♂ ad. sk.	Kyska Harbour, Alaska, July 1873 (*W. H. Dall*; Sm. nos. 65473–75).	Salvin-Godman Coll.
g. Ad. sk.	Kyska Harbour, July 21, 1875 (*M. Baker*: Sm. no. 65477).	U.S. Nat. Mus. [P.].
h. ♀ ad. sk.	Iliuliuk, Unalashka, Oct. 13, 1880 (*T. N. Bean*).	Sclater Coll.

74. PEUCÆA.

Type.

Peucæa, *Audubon, Synopsis*, p. 112 (1839) ..... P. bachmani.

Range. Southern United States and Mexico.

Key to the Species.

a. With yellow on the lesser wing-coverts and edge of the wing; sides of body more or less distinctly streaked; malar streak very indistinct or obsolete.
  a'. No white at end of outer tail-feathers .. *æstivalis* and allies, pp. 709–
  b'. Outer tail-feathers tipped with white.. *cassini*, p. 712. [711.
b. With no yellow on the lesser wing-coverts; sides of body not streaked; malar streak of black distinct.
  c'. Lesser wing-coverts brown, not chestnut .... *ruficeps* and allies, pp. 712–
  d'. Lesser wing-coverts bright chestnut, forming a large shoulder-patch ..... [715. *carpalis*, p. 715.

1. Peucæa æstivalis.

Fringilla æstivalis, *Licht. Verz. Doubl.* p. 25 (1823).
Ammodromus æstivalis, *Gray, Gen. B.* ii. p. 374 (1849), *id. Hand-l. B.* ii. p. 96, no. 7427 (1870).
Peucæa æstivalis, *Cab. Mus. Hein.* Th. i. p. 132 (1850); *Baird, B. N. Amer.* p. 484 (1858); *Scl. Cat. Amer. B.* p. 115 (1862); *Baird, Ibis*, 1867, p. 270; *Allen, Bull. Mus. C. Z.* ii. p. 279 (1871); *Coues, Key N. Amer. B.* p. 140 (1872); *Maynard, B. East. N. Amer.* p. 125 (1878); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 39, pl. 28. fig. 4 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 180 (1881); *Coues, Check-list N. Amer. B.* p. 54 (1882); *id. Key N. Amer. B.* 2nd ed. p. 273 (1884); *Brewster, Auk*, ii. p. 105 (1885); *A. O. U. Check-list N. Amer. B.* p. 277 (1886).

Adult male. General colour above broadly streaked with bluish grey and chestnut, the feathers being chestnut, with broad longitudinal black centres and bluish-grey margins; lesser wing-coverts dull olive-yellow, with blackish bases; median and greater coverts black, broadly edged and tipped with ashy grey, with a slight subterminal shade of chestnut, the latter more distinct on the greater series; bastard-wing blackish, conspicuously edged with ashy grey; edge of wing yellow; primary-coverts and quills blackish, fringed with ashy, more hoary on the outer primaries; the secondaries externally chestnut, the innermost edged and tipped with ashy grey; upper tail-coverts like the back and fringed with ashy grey; tail-feathers dusky brown, washed with ashy on both webs, the outer feathers paler ashy brown towards the ends; crown of head like the back; lores and feathers round eye yellowish white; ear-coverts pale ashy, with whitish shaft-lines; a chestnut line along the upper edge, and a patch of black behind the coverts, the chestnut streak surmounted by a short eyebrow of ashy grey; cheeks a little lighter ashy than the throat, followed by an indistinct dusky malar line; sides of neck clear ashy grey, very little streaked with chestnut; throat, fore neck, and chest pale ochreous buff, more or less tinged with ashy; breast and abdomen white; sides of body and flanks ochreous buff, washed with ashy, the sides of the upper breast streaked with

chestnut; thighs and under tail-coverts pale ochreous buff; under wing-coverts and axillaries pale olive-yellow, with ashy bases; edge of wing brighter yellow; quills below dusky, ashy along the inner edge. Total length 5·7 inches, culmen 0·5, wing 2·25, tail 2·3, tarsus 0·7.

Hab. Florida and Southern Georgia, south to Mexico.

a, b. ♂ ♀ ad. sk.	Savannah, Georgia (*S.F. Baird*; Sm. nos. 2404–2407).	Salvin-Godman Coll.
c. Ad. sk.	Georgia (*S. F. Baird*).	Sclater Coll.
d. ♂ ad. sk.	Charleston, South Carolina, May 23, 1884.	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Jacksonville, Florida, April 7, 1867 (*W. Brewster*).	Hon. G. B. Sennett [P.].
f. Ad. sk.	Putla, Mexico (*A. Boucard*).	Sclater Coll.

Subsp. *a.* Peucæa bachmani.

Fringilla bachmani, *Audub. B. Amer.* pl. 165; *id. Orn. Biogr.* ii. p. 366 (1834).

Peucæa bachmani, *Audub. Syn.* p. 112 (1839); *id. B. Amer.* iii. p. 113, pl. 176 (1841); *Bp. Consp.* i. p. 481 (1850).

Ammodromus bachmani, *Gray, Gen. B.* ii. p. 374 (1849).

Peucæa illinoensis, *Ridgw. Bull. Nutt. Orn. Club*, iv. p. 219 (1879); *Brewster, Auk*, ii. p. 105 (1885).

Peucæa æstivalis illinoensis, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 180, 217 (1881).

Peucæa æstivalis bachmani, *Brewster, Auk*, ii. p. 106 (1885); *A. O. U. Check-list N. Amer. B.* p. 277 (1886).

Adult female. Similar to *P. æstivalis*, of which it is a light-coloured form, differing only in its more foxy rufous colour, with less grey and smaller black centres to the dorsal feathers: "bill dark brown above, light blue beneath; feet very light flesh-colour; iris hazel" (*Audubon*). Total length 5 inches, culmen 0·5, wing 2·4, tail 2·2, tarsus 0·65.

Mr. Brewster (Auk, ii. p. 106) admits that intermediate specimens between *P. bachmani* and *P. æstivalis* occur at Charleston, where the ranges of the two species meet. The single specimen in the British Museum shows the characters of the race very plainly, but I cannot judge sufficiently of the constancy of their value without examining a larger series.

Hab. South Carolina and Alabama, west to Texas, and north to Southern Illinois and Southern Indiana.

a. Ad. sk.	Charleston.	Hon. G. B. Sennett [P.].

Subsp. *β.* Peucæa arizonæ.

Peucæa æstivalis, var. arizonæ, *Ridgw. Amer. Nat.* viii. p. 615 (1873); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 285 (1875).

Peucæa arizonæ, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 183, 217 (1881); *A. O. U. Check-list N. Amer. B.* p. 277 (1886).

Peucæa æstivalis arizonæ, *Coues, Check-list N. Amer. B.* p. 54 (1882); *id. Key N. Amer. B.* 2nd ed. p. 374 (1884).

Of the value of this race I cannot form an effective judgment, as I have only seen one specimen, and that one in bad condition. It is probable that *P. arizonæ* is only a pale form of *P. æstivalis* or *P. bachmani*.

Hab. Southern Arizona and Sonora.

a. ♂ ad. sk.	Crittenden, Arizona, July 20, 1884 (*F. Stephens*).	H. K. Coale, Esq. [P.].

Subsp. γ. Peucæa botterii.

Zonotrichia botterii, *Scl. P. Z. S.* 1857, p. 214.

Peucæa cassini (*nec Woodh.*), *Baird, B. N. Amer.* p. 486 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 16 (1858); *Sumichr. Mem. Bost. Soc. N. H.* ii. p. 551 (1869).

Peucæa botterii, *Scl. Cat. Amer. B.* p. 116 (1862); *id. & Salv. P. Z. S.* 1868, p. 323; *iid. Nomencl. Av. Neotr.* p. 32 (1873); *Ridgw. in Hist. N. Amer. B.* ii. p. 38, footnote (1874); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 389 (1886).

Coturniculus mexicanus, *Lawr. Ann. Lyc. N. Y.* viii. p. 474 (1866).

Ammodromus botterii, *Gray, Hand-l. B.* ii. p. 96, no. 7426 (1870).

Peucæa æstivalis, var. botterii, *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874).

Peucæa arizonæ (*nec Ridgw.*), *Ridgw. in Merrill, Proc. U.S. Nat. Mus.* i. p. 127 (1878); *id. op. cit.* iii. p. 3 (1881).

Peucæa mexicana, *Ridgw. Proc. U.S. Nat. Mus.* viii. p. 98 (1885); *A. O. U. Check-list N. Amer. B.* p. 278 (1886).

Adult (type of species). Similar to *P. æstivalis*, of which it is a large form. Total length 6 inches, culmen 0·5, wing 2·6, tail 2·55, tarsus 0·85.

There is considerable difference between the breeding and winter plumages in this species. As the plumage becomes worn, nearly all the grey of the upper surface disappears, leaving the mesial black of the feathers predominant, with a good deal of the chestnut. In winter the rufous edges of the secondaries are very distinct, and the inner secondaries are fringed with rufous at the ends. This latter edging becomes grey in the summer.

Similar changes of plumage are undergone by the other races of *P. æstivalis*, and it is necessary for correct comparison that specimens killed at similar seasons of the year should be examined.

Young. More mottled than the adults, the feathers being dusky brown, with sandy-buff margins; on the scapulars and inner secondaries the margins are more chestnut; lores tinged with yellow; under surface of body more fulvescent than the adults, with brown spots on the sides of the fore neck.

Hab. Mexico.

a. Ad. sk.	Orizaba (*Botteri*).	Sclater Coll. (Type of species.)
b. Ad.; *c*. Juv. sk.	Orizaba (*Botteri*).	A. Botteri [C.].
d. Ad. sk.	Mexico.	Purchased.
e. ♂ ad. sk.	Atlisco, Mexico, June 1866 (*A. Boucard*).	Salvin-Godman Coll

2. Peucæa cassini.

Zonotrichia cassini, *Woodh. Proc. Philad. Acad.* 1852, p. 60.

Peucæa cassini, *Baird, B. N. Amer.* p. 458 (1850); *Scl. Cat. Amer. B.* p. 115 (1862); *Dresser, Ibis*, 1865, p. 489; *Baird, Ibis*, 1867, p. 270; *Sumichr. Mem. Bost. Soc. Nat. Hist.* i. p. 551 (1869); *Cooper, B. Calif.* p. 219 (1870); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 42, pl. 28. fig. 5 (1874); *Coues, B. N.-West*, p. 140 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 287 (1875); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 18 (1878); *Merrill, Proc. U.S. Nat. Mus.* i. p. 128 (1878); *Ridgw. op. cit.* iii. p. 186 (1881); *Coues, Check-l. N. Amer. B.* p. 55 (1882); *id. Key N. Amer. B.* 2nd ed. p. 374 (1884); *Stephens, Auk*, iii. p. 226 (1885); *Hensh. Auk*, iii. p. 74 (1886); *A. O. U. Check-list N. Amer. B.* p. 278 (1886).

Ammodromus cassini, *Gray, Hand-l. B.* ii. p. 96, no. 7428 (1870).

Peucæa æstivalis, var. cassini, *Allen, Bull. Mus. C. Z.* iii. p. 177 (1872).

Adult male. Similar to *P. æstivalis*, but everywhere paler, especially underneath; a tolerably distinct malar streak; flanks broadly streaked with blackish; outer tail-feathers with a distinct paler ashy shade towards the ends, terminating in a white mark at the end of the inner web. Total length 5·5 inches, culmen 0·45, wing 2·45, tail 2·5, tarsus 0·7.

Adult female. Not different in colour from the male. Total length 6·2 inches, culmen 0·45, wing 2·7, tail 2·65, tarsus 0·8.

Hab. Plains of Kansas southward and eastward through Texas, New Mexico, and Arizona, into Mexico.

a–f. ♂; *g–k.* ♀ ad. sk.	Texas, March 1886.	Hon. G. B. Sennett [P.].
l. ♂ ad. sk.	Laredo, Texas, Dec. 5, 1885 (*Armstrong*).	Hon. G. B. Sennett [P.].
m. ♂ ad. sk.	Crittenden, Arizona, July 23, 1884 (*F. Stephens*).	Hon. G. B. Sennett [P.].
n, o. ♂ ad. sk.	Crittenden, July 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
p, q. ♂ ♀ ad. sk.	Crittenden, July 22, 1884 (*F. Stephens*).	H. K. Coale, Esq. [P.].
r. ♂ ad. sk.	Tucson, Arizona, July 27, 1884 (*F. Stephens*).	H. K. Coale, Esq. [P.].
s. ♂ ad. sk.	Arizona (*E. W. Nelson*; Sm. no. 99667).	H. K. Coale, Esq. [P.].
t. Ad. sk.	Arizona (*E. W. Nelson*; Sm. no. 99682).	U.S. Nat. Mus. [P.].
u. ♂ ad. sk.	Camp Lowell, Arizona, Sept. 11, 1874 (*H. W. Henshaw*; Sm. no. 69606).	Salvin-Godman Coll.
v. Ad. sk.	Mexico.	Sclater Coll.

3. Peucæa ruficeps.

Ammodromus ruficeps, *Cass. Proc. Philad. Acad.* 1852, p. 184; *id. Ill. Orn. Calif.* p. 135, pl. 20 (1854); *Gray, Hand-l. B.* ii. p. 96, no. 7429 (1870).

Peucæa ruficeps, *Baird, B. N. Amer.* p. 486 (1858); *id. Ibis*, 1867,

p. 270; *Cooper, Orn. Calif.* p. 218 (1870); *Coues, Key N. Amer. B.* p. 140 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 45, pl. 28. fig. 6 (1874); *Belding, Proc. U.S. Nat. Mus.* i. p. 418 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 180 (1881); *Coues, Check-list N. Amer. B.* p. 55 (1882); *id. Key N. Amer. B.* 2nd ed. p. 374 (1884); *Everm. Auk*, iii. p. 182 (1886); *A. O. U. Check-list N. Amer. B.* p. 278 (1886).

Adult male. General colour above chestnut-brown, varied with ashy, the feathers being ashy on the edges, rufous in the centre; lower back and rump more uniform ashy brown; lesser wing-coverts brown, washed with ashy; median coverts brown, with blackish centres and ashy margins; greater coverts dark brown, externally ashy, the innermost washed with chestnut; bastard-wing dark brown, with ashy or whity-brown margins; primary-coverts and quills dark brown, edged with ashy, whity brown on the primaries, the secondaries externally rufous, the innermost margined with ashy towards the ends; upper tail-coverts reddish brown, margined with ashy; tail-feathers brown, crossed with indistinct dusky brown bars under certain lights, the feathers clearer rufous on the edges; crown of head uniform chestnut or bay, with a few ashy tips on the feathers of the centre of the crown and nape; lores whitish, as well as a tolerably broad eyebrow, which becomes ashy above the ear-coverts; feathers round eye whitish; base of forehead black, extending in a narrow line above the eyebrow; ear-coverts dark ochreous brown, with paler shaft-streaks, and having a chestnut line along the upper margin; cheeks ochreous white, followed by a distinct malar line of black; throat pale ochreous buff, the chin whiter; lower throat and fore neck ashy, with an ochreous tinge; centre of breast and abdomen ashy whitish; sides of body and flanks ochreous brown, more or less ashy; thighs like the flanks; under tail-coverts clear ochreous buff; under wing-coverts and axillaries ashy brown, margined with ochreous; quills below dusky brown, rufous along the inner edge. Total length 5·4 inches, culmen 0·5, wing 2·4, tail 2·45, tarsus 0·75.

Adult female. Similar to the male. Total length 5·5 inches, culmen 0·5, wing 2·3, tail 2·3, tarsus 0·85.

Hab. California.

a. ♂ ad. sk.	Nicasio, California, July 11, 1879.	R. B. Sharpe, Esq. [P.].
b, c. ♂ ♀ ad. sk.	Nicasio, March 29, 1881.	Hon. G. B. Sennett [P.].
d. Ad. sk.	[North America.]	Salvin-Godman Coll.

Subsp. *α.* Peucæa homochlamys.

Peucæa ruficeps, var. boucardi *(nec Scl.)*, *Hensh. Rep. Orn. Spec. Wheeler's Exped.* p. 117 (1874); *id. Rep. Expl. 100th Merid.* p. 289 (1875).

Peucæa ruficeps boucardi *(nec Scl.)*, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 180 (1881); *Coues, Check-l. N. Amer. B.* p. 55 (1882);

Belding, Proc. U.S. Nat. Mus. vi. p. 348 (1883); *Coues, Key N. Amer. B.* p. 375 (1884); *A. O. U. Check-l. N. Amer. B.* p. 278 (1886); *Scott, Auk*, iii. p. 83 (1886).

Adult male. Similar to *P. ruficeps*, but paler, with the crown of a lighter rufous, the mantle and back uniform without any dark centres to the feathers, and the quill-lining pale ashy rufous, not so chestnut as in *P. ruficeps*. Total length 5·7 inches, culmen 0·5, wing 2·55, tail 2·75, tarsus 0·75.

Adult female. Similar to the male. Total length 5·5 inches, culmen 0·5, wing 2·4, tail 2·3, tarsus 0·8.

Hab. Southern New Mexico and Arizona.

a. ♀ ad. sk.	Santa Rita Mountains, Arizona, June 13, 1884 (*F. Stephens*).	H. K. Coale, Esq. [P.].
b. ♂ ad. sk.	Santa Rita Mountains, June 29, 1884 (*E. W. Nelson*; Sm. no. 98899).	H. K. Coale, Esq. [P.].
c. ♂ ad. sk.	Santa Rita Mountains, July 1884 (*E. W. Nelson*; Sm. no. 99338).	U.S. Nat. Mus. [P.].
d. ♀ ad. sk.	Santa Rita Mountains, June 22, 1884 (*E. W. Nelson*; Sm. no. 98892).	U.S. Nat. Mus. [P.].
e. ♂ ad.; *f.* ♀ juv. sk.	Santa Rita Mountains, July 1, 1884 (*F. Stephens*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	Sierras de Santa Catalina, Arizona, March 27, 1885 (*W. E. D. Scott*).	Hon. G. B. Sennett [P.].
h. ♀ ad. sk.	Catalina Mill, July 28, 1884 (*W. E. D. Scott*).	Hon. G. B. Sennett [P.].

Subsp. β. Peucæa boucardi.

Ammodromus sp., *Scl. P. Z. S.* 1857, p. 214.

Peucæa boucardi, *Scl. P. Z. S.* 1859, p. 380; *id. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 391 (1886).

Zonotrichia boucardi, *Scl. P. Z. S.* 1867, p. 1, pl. i.

Ammodromus boucardi, *Gray, Hand-l. B.* ii. p. 96, no. 7430 (1870).

Peucæa ruficeps, var. boucardi, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 38 (1874); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 21 (1876).

Peucæa ruficeps eremæca, *Brown, Bull. Nutt. Orn. Club*, vii. p. 26 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 375 (1884); *A. O. U. Check-l. N. Amer. B.* p. 279 (1886).

Adult (type of species). Similar to *P. ruficeps*, of which it is a large, pale, greyer-coloured race, with the ear-coverts conspicuously more ashy. Total length 6·5 inches, culmen 0·55, wing 2·65, tail 2·95, tarsus 0·85.

Hab. Mexico, extending into Texas and Arizona.

a. Ad. sk.	La Puebla, Mexico (*A. Boucard*).	Sclater Coll. (Type of species.)
b. ♂ ad. sk.	La Puebla, Jan. 1866 (*A. Boucard*).	Salvin-Godman Coll.

c, d. Ad. sk.	Orizaba (*Botteri*).	Sclater Coll.
e. Ad. sk.	Mexico.	Sclater Coll.
f. Ad. sk.	Mexico.	Purchased.
g. ♂ ad. sk.	Catalina Mill, Arizona, Oct. 1, 1883 (*W. E. D. Scott*).	Hon. G. B. Sennett [P.].

Subsp. γ. Peucæa notosticta.

Peucæa notosticta, *Scl. & Salv. P. Z. S.* 1868, p. 322; *iid. Nomencl. Av. Neotr.* p. 32 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 393, tab. 28. fig. 1 (1886).

Ammodromus notosticta, *Gray, Hand-l. B.* ii. p. 96, no. 7431 (1870).

Adult male. Similar to *P. boucardi*, but larger, with the bill black; upper surface of body browner, and not so grey, and broadly streaked with black, the wing-coverts also broadly streaked with black. Total length 6·6 inches, culmen 0·55, wing 2·7, tail 2·8, tarsus 0·9.

Hab. Mexico.

a. Ad. sk.	South Mexico (*A. Boucard*).	Salvin-Godman Coll. (Type of species.)
b. Ad. sk.	Oaxaca (*A. Boucard*).	Sclater Coll.

4. Peucæa carpalis.

Peucæa carpalis, *Coues, Amer. Nat.* vii. p. 322 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* iii. App. p. 515 (1874); *Hensh. Rep. Expl. 100th Merid.* p. 291 (1875); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 180 (1881); *Coues, Check-list N. Amer. B.* p. 55 (1882); *id. Key N. Amer. B.* 2nd ed. p. 375 (1884); *A. O. U. Check-list N. Amer. B.* p. 278 (1886).

Adult male. General colour above light ashy brown, with a slight rufous tinge, the mantle and back distinctly streaked with blackish-brown centres to the feathers; lower back and rump uniform ashy brown; scapulars like the back, but a little more chestnut; lesser wing-coverts uniform bright chestnut; median and greater coverts black, margined with ashy white, with a slight rufous shade on the latter; bastard-wing blackish, edged with white; primary-coverts blackish, fringed with ashy brown; quills blackish, edged with brown, hoary white on the primaries, the secondaries rufous-brown on the outer web; upper tail-coverts ashy brown, with dusky centres; tail-feathers brown, edged with ashy brown, the two outer ones white on the outer web and round the tip, the white increasing on the outer feather to a considerable extent; crown of head light chestnut, streaked with ashy margins to the feathers; lores dull white, extending into a broad eyebrow of pale ashy grey; feathers round eye dull white, as well as a conspicuous eyelid; ear-coverts ashy grey, the checks a little whiter, with a distinct line of blackish along the upper and lower margins; throat and under surface of body white, shaded with pale ashy grey on the lower throat and fore neck; sides of body and flanks pale brown; thighs ashy; under tail-coverts pale ochreous buff; under wing-coverts and axillaries white, with ashy bases; quills below

dusky, inner edge of quills ashy, with a rufescent tinge. Total length 5·3 inches, culmen 0·4, wing 2·55, tail 2·45, tarsus 0·7.

Adult female. Similar to the male in colour. Total length 5·5 inches, culmen 0·45, wing 2·45, tail 2·5, tarsus 0·65.

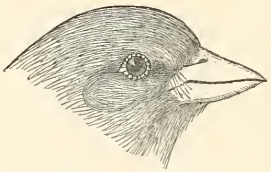
Hab. Arizona.

a. ♂ ad. sk.	Sierras de Santa Catalina, Arizona, Jan. 1885 (*W. E. D. Scott*).	Hon. G. B. Sennett [P.].
b. ♀ ad. sk.	Catalina Mill, Oct. 26, 1884 (*W. E. D. Scott*).	Hon. G. B. Sennett [P.].
c. Ad. sk.	Tucson, Arizona, Jan. 16, 1873 (*Lieut. C. Bendire*; Sm. no. 87947).	U.S. Nat. Mus. [P.].
d. ♂ juv. sk.	Camp Lowell, Arizona, Sept. 9, 1874 (*H. W. Henshaw*; Sm. no. 69617).	Salvin-Godman Coll.

75. PASSERELLA.

Type.

Passerella, *Swains. Classif. B.* ii. p. 285 (1837)..... P iliaca.



Head of *Passerella iliaca*.

Range. North America.

Key to the Species.

a. Head and back mottled, ashy, spotted or streaked with chestnut; a good deal of bright chestnut on the ear-coverts ..... *iliaca*, p. 716.

b. Head and back uniform.

a'. Upper surface chocolate-brown, not grey .. *unalaschensis*, p. 718.

b'. Upper surface slaty grey.

a''. Smaller; thickly spotted below..... *schistacea*, p. 720.

b''. Much larger; bill twice the size of foregoing; much whiter and less thickly spotted below ..... *megarhyncha*, p. 720.

1. Passerella iliaca.

Fringilla iliaca, *Merr. Beitr. besond. Gesch. Vög.* ii. p. 40, pl. 10 (1786–87); *Gm. Syst. Nat.* i. p. 923 (1788); *Audub. B. Amer.* pl. 108; *id. Orn. Biogr.* ii. p. 58 (1834), v. p. 512 (1839); *id. B. Amer.* iii. p. 139, pl. 185 (1841).

Fringilla rufa, *Wils. Amer. Orn.* iii. p. 53, pl. 22. fig. 4 (1811).

Fringilla (Zonotrichia) iliaca, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 257 (1831).

Zonotrichia iliaca, *Jard. ed. Wils. Amer. Orn.* p. 341, pl. 22. fig. 4

(1832); *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 95, no. 7404 (1870).

Passerella iliaca, *Swains. Classif. B.* ii. p. 288 (1873); *Bp. Comp. List B. Eur. & N. Amer.* p. 31 (1838); *id. Consp.* i. p. 477 (1850); *Baird, B. N. Amer.* p. 488 (1858); *Scl. Cat. Amer. B.* p. 118 (1862); *Blakist. Ibis*, 1863, p. 79; *Baird, Ibis*, 1867, p. 270; *Lawr. Ann. Lyc. N. Y.* viii. p. 287 (1868); *Dall & Bann. Trans. Chicago Acad.* i. p. 285 (1869); *Allen, Bull. Mus. C. Z.* ii. p. 272 (1871); *Coues, Key N. Amer. B.* p. 147 (1872); *Maynard, B. East. N. Amer.* p. 106 (1878); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 50, pl. 78. fig. 2 (1874); *Coues, B. N.-West*, p. 160 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Coues, Check-l. N. Amer. B.* p. 58 (1882); *Nelson, Cruize R. S. 'Corwin,'* p. 72 (1883); *Streets, Proc. U.S. Nat. Mus.* vi. p. 117 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 385 (1884); *Dutcher, Auk*, i. pp. 177, 178 (1884); *Merriam, t. c.* p. 295; *Bicknell, Auk*, ii. p. 180 (1885); *Agersb. t. c.* p. 281; *Fox, Auk*, iii. p. 318 (1886); *Seton, t. c.* p. 324; *Turner, Proc. U.S. Nat. Mus.* viii. p. 241 (1885); *A. O. U. Check-list N. Amer. B.* p. 281 (1886).

Passerella obscura, *Verrill, Proc. Bost. Soc. N. H.* ix. p. 138 (1862); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 235 (1881).

Adult male. General colour above vinous chestnut, mottled with ashy grey, the feathers being ashy-grey with mesial markings of chestnut, widening out at the end of the feathers; wing-coverts chestnut, the lesser series slightly browner; the median and greater coverts with a narrow fulvous ending, forming a feebly-pronounced double wing-bar; bastard-wing and primary-coverts blackish, fringed with rufous; quills blackish, externally rufous, the secondaries more decidedly chestnut on the outer webs, the innermost slightly tipped with fulvous, like the coverts; upper tail-coverts uniform chestnut; tail-feathers dusky brown, externally chestnut, increasing in extent towards the outer feathers; crown of head like the back, and mottled in the same manner; lores white, extending in a faintly marked eyebrow; feathers round eye whitish, as also the eyelid; ear-coverts chestnut, the fore part streaked with whitish shaft-lines; cheeks whitish anteriorly, the hinder part mottled with chestnut spots; a broad malar line of chestnut; throat and under surface of body white, with triangular spots of chestnut on the throat, fore neck, and breast, larger and more longitudinal on the sides of body and flanks; abdomen pure white; thighs brown; under tail-coverts buffy white; under wing-coverts and axillaries white shaded with ashy, and having dusky bases; quills below dusky, ashy white along the inner edge: "bill dark brown above, the base of the lower mandible yellow, its tip bluish; feet flesh-coloured; iris deep brown" (*Audubon*). Total length 6·6 inches, culmen 0·45, wing 3·7, tail 2·8, tarsus 0·85.

Adult female. Similar to the male, but not quite so strongly marked, especially on the head; the spots on the under surface darker, and blackish instead of chestnut on the breast and flanks. Total length 6·3 inches, culmen 0·5, wing 3·3, tail 2·6, tarsus 0·85.

Young. Not particularly different after the first moult, though in an early stage much darker; back rufous-brown, with darker

streaks; no wing-bars; all the parts heavily marked. There is much individual variation in colour, independently of sex, age, or season. (*Coues.*)

Hab. Eastern North America, west to the Plains and Alaska (valley of the Yukon to the Pacific), from the Arctic coast south to the Gulf States. Breeds north of the United States, winters chiefly south of the Potomac and Ohio rivers. (*A. O. U. Check-list, l. c.*)

a. Ad. sk.	Repulse Bay.	Dr. Rae [P.].
b, c. ♂ ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
d, e, f. Ad. sk.	49th Parallel, April 1874 (*G. Dawson*).	N.A. Boundary Commission [P.].
g, h. ♂ ad. sk.	Grand Crossing, Illinois, March 27, 1884 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
i. ♀ ad. sk.	Chicago, Illinois, April 20, 1868 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
k. Ad. sk.	Hyde Park, Illinois, Oct. 23, 1876 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
l. ♀ ad. sk.	Mount Carmel, Illinois, Oct. 12, 1869 (*R. Ridgway*; Sm. no. 83665).	Salvin-Godman Coll.
m. ♀ ad. sk.	Laurel, Maryland, April 8, 1879.	U.S. Nat. Mus. [P.].
n. Ad. sk.	Washington, D.C. (*C. Drexler*; Sm. no. 28645)	Salvin-Godman Coll.
o. ♂ ad. sk.	Washington, Feb. 1842 (*S. F. Baird*; Sm. no. 25264).	Salvin-Godman Coll.
p. ♂ ad. sk.	Alexander County, Virginia, Feb. 25, 1882 (*G. Shoemaker*; Sm. no. 86044).	U.S. Nat. Mus. [P.].

2. Passerella unalaschensis.

Oonalashka Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 202 (1783); *Penn. Arctic Zool.* ii. p. 52 (1785).

Emberiza unalaschensis, *Gm. Syst. Nat.* i. p. 875 (1788).

Fringilla townsendi, *Audub. B. Amer.* pl. 424. fig. 7; *id. Orn. Biogr.* v. p. 236 (1839); *id. B. Amer.* iii. p. 43, pl. 187 (1841).

Fringilla meruloides, *Vigors, in Beechey's Voyage*, p. 19 (1839).

Fringilla (Passerella) townsendi, *Nutt. Man.* p. 533 (1840).

Zonotrichia townsendi, *Gray, Gen. B.* ii. p. 374 (1849); *id. Hand-l. B.* ii. p. 95, no. 7405 (1870).

Zonotrichia unalaschensis, *Gray, Gen. B.* ii. p. 374 (1849).

Passerella townsendi, *Bp. Consp.* i. p. 477 (1850); *Baird, B. N. Amer.* p. 489, pl. lxix. fig. 3 (1858); *Scl. Cat. Amer. B.* p. 119 (1862); *Baird, Ibis*, 1867, p. 270; *Brown, Ibis*, 1868, p. 422; *Dall & Bann. Trans. Chicago Acad.* i. p. 285 (1869); *Coues, Key N. Amer. B.* p. 352 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 53, pl. 28. fig. 8 (1874); *Cooper, Proc. U.S. Nat. Mus.* ii. p. 248 (1880).

Passerella unalaschensis, *Bp. Consp.* i. p. 477 (1850); *Finsch, Abhandl. nat. Ver. Bremen*, iii. p. 53 (1872).

Passerella iliaca, var. townsendi, *Coues, Key N. Amer. B.* p. 147 (1872); *Allen, Bull. Mus. C. Z.* iii. p. 177 (1875); *Belding, Proc. U.S. Nat. Mus.* i. p. 418 (1878).

Passerella townsendi, *a.* townsendi, *Coues, B. N.-West*, p. 162 (1874).

Passerella iliaca unalaschensis, *Ridgw. Proc. U.S. Nat. Mus.* iii.

pp. 3, 181 (1880); *Coues, Check-l. N. Amer. B.* p. 58 (1882); *Bean, Proc. U.S. Nat. Mus.* v. pp. 158, 173 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 385 (1884); *Anthony, Auk*, iii. p. 169 (1886); *A. O. U. Check-list N. Amer. B.* p. 282 (1886).

Passerella iliaca, *Nelson, Cruize R.S. 'Corwin,'* p. 72 (1883).

Adult male. General colour above uniform chocolate-brown with somewhat of a rufous shade, especially towards the rump and upper tail-coverts, the latter decidedly dark chestnut; lesser wing-coverts like the back; median and greater coverts dusky brown, externally reddish brown or dark chestnut; bastard-wing and primary-coverts blackish, with a slight reddish tint on the outer web; quills blackish, the primaries edged with brown, the secondaries reddish brown or dark chestnut on the outer web; tail-feathers blackish, externally edged with reddish brown; crown of head like the back; lores dusky, mottled with white; a faintly indicated ashy eyebrow; ear-coverts dull chestnut-brown, varied on the fore part with whitish shaft-streaks; cheeks and throat also reddish or chestnut-brown, slightly varied with white on the fore part of the cheeks and throat; on the lower throat a patch of white; remainder of under surface of body thickly mottled, the feathers being reddish brown or blackish at the ends, with a subterminal white bar; breast and abdomen rather whiter, with smaller spots of black; sides of body and flanks and thighs uniform chestnut-brown; under tail-coverts sandy rufous, with blackish centres; under wing-coverts and axillaries ashy brown, with fulvous edges; quills below dusky, ashy along the inner edge. Total length 6·8 inches, culmen 0·6, wing 3·3, tail 2·8, tarsus 1.

Adult female. Similar to the male, but not quite so strongly marked. Total length 6·5 inches, culmen 0·55, wing 3·15, tail 2·7, tarsus 0·95.

Hab. Pacific coast-region, from Kodiak south in winter to Southern California; breeds north of the United States (*A. O. U. Check-list, l. c.*).

a. Ad. sk.	Simiahmoo (*Dr. Kennerley*).	Sclater Coll.
b. ♂ ad. sk.	Orcas Island.	Dr. Lyall [P.].
c. Ad. sk.	Fort Vancouver, W. T., Jan. 1854 (*Dr. J. G. Cooper*; Sm. no. 6239).	Salvin-Godman Coll.
d. ♂ ad. sk.	Upper Klamath Lake, Oregon, Nov. 15 (*A. Forrer*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Fort Klamath, April 11, 1883 (*Capt. Bendire*; Sm. no. 94848).	U.S. Nat. Museum.
f. Ad. sk.	N. California.	Sclater Coll.
g. Ad. sk.	California.	Purchased.
h. Ad. sk.	Big Trees, California (*L. Belding*; Sm. no. 73943).	Salvin-Godman Coll.
i. ♂ ad. sk.	Fort Whitney, California, Oct. 11, 1875 (*H. W. Henshaw*; Sm. no. 72229).	Salvin-Godman Coll.
k. ♀ ad. sk.	Walker's Basin, California, Nov. 5, 1875 (*H. W. Henshaw*; Sm. no. 72225).	Salvin-Godman Coll.

l. ♂ ad. sk.	Nicasio, California, Feb. 28, 1879.	H. K. Coale, Esq. [P.].
m. ♀ ad. sk.	Nicasio, Nov. 12, 1881 (*C. A. Allen*).	R. B. Sharpe, Esq. [P.].

Subsp. *a.* Passerella schistacea.

Passerella schistacea, *Baird, B. N. Amer.* p. 490, pl. 69. fig. 3 (1858); *id. Ibis*, 1867, p. 270; *Ridgw. Rep. Surv. 40th Parallel*, p. 486 (1877).
Zonotrichia schistacea, *Gray, Hand-l. B.* ii. p. 95, no. 7406 (1870).
Passerella iliaca, var. schistacea, *Coues, Key N. Amer. B.* p. 352 (1872); *Allen, Bull. Mus. C. Z.* iii. pp. 168, 177 (1872); *Belding, Proc. U.S. Nat. Mus.* i. p. 418 (1878).
Passerella townsendi, var. schistacea, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 56, pl. 27. fig. 9 (1874); *Coues, B. N.-West*, p. 162 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 293 (1875).
Passerella iliaca schistacea, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 418 (1878); *Coues, Check-list N. Amer. B.* p. 58 (1882); *A. O. U. Check-list N. Amer. B.* p. 282 (1886).

Adult male. Similar to *P. unalaschensis*, but slaty grey above instead of chocolate-brown, the reddish colour on the wings and tail much lighter and more of a light bay tint; sides of head slaty grey, as well as the sides of body and flanks. Total length 6·5 inches, culmen 0·5, wing 3·3, tail 3·1, tarsus 0·9.

Mr. Ridgway notes that several specimens of *P. unalaschensis* show an approach to *P. schistacea*, while some specimens of the latter are decidedly browner than others.

Hab. Rocky-Mountain region of the United States, east in winter to the Plains (Kansas), west to Nevada and California.

a. Ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
b. ♂ ad. sk.	Fort Bridger, Utah, May 20, 1858 (*C. Drexler*; Sm. no. 11237).	Salvin-Godman Coll.
c. ♀ ad. sk.	Fort Tejon, California, Jan. 17, 1858 (*J. Xantus*; Sm. no. 25530).	Salvin-Godman Coll.

Subsp. *β.* Passerella megarhyncha.

Passerella megarhyncha, *Baird, B. N. Amer.* p. 925 (1858); *Cooper, Orn. Calif.* p. 222 (1870).
Passerella townsendi, var. megarhyncha, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 57, pl. 28. fig. 10 (1874).
Passerella schistacea, var. megarhyncha, *Ridgw. Rep. Surv. 40th Parallel*, p. 485 (1877).
Passerella iliaca, var. megarhyncha, *Belding, Proc. U.S. Nat. Mus.* i. p. 418 (1878).
Passerella iliaca megarhyncha, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1880); *Coues, Check-list N. Amer. B.* p. 58 (1882); *A. O. U. Check-list N. Amer. B.* p. 282 (1886).

Adult male. Differs from *P. unalaschensis* in its much larger bill

and legs, and thickly spotted under surface. Total length 6·7 inches, culmen 0·55, wing 3·3, tail 3·4, tarsus 0·9.

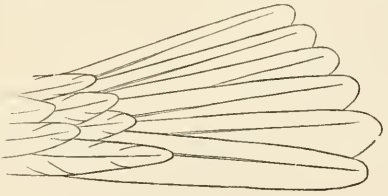
Young male. Uniform like the adult, but slightly washed with brown; under surface of body more ashy, with numerous black streaks and spots.

Hab. Sierra Nevada and coast-range, California.

a. ♂ ad. sk.	Bear Valley, California, Sept. 6, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
b. ♂ ad. sk.	Nicasio, California, Jan. 20, 1883 (*C. A. Allen*).	R. B. Sharpe, Esq. [P.].
c. ♂ juv. sk.	Camp Bidwell, California, Aug. 7, 1878 (*H. W. Henshaw*; Sm. no. 77689).	Salvin-Godman Coll.

76. HÆMOPHILA.

	Type.
Aimophila, *Swains. Classif. B.* p. 287 (1837)	H. rufescens.
Hæmophila (*nom. emend.*), *Cab. Mus. Hein.* Th. i. p. 132 (1850)	H. rufescens.



Tail of *Hæmophila rufescens*.

Range. The greater part of Central America, reappearing in Peru.

Key to the Species.

a. With no black on the throat or fore neck.
  a'. With no yellow on the edge of the wing.
    a''. No black malar line; ear-coverts black or blackish, as well as the region of the eye; a white eyebrow.
      a'''. Ear-coverts black, streaked with white shaft-lines; no white streak down the crown, which is chestnut streaked with black, with sometimes an ashy streak down the centre of the crown ..... *superciliosa*, p. 722.
      b'''. Ear-coverts black, without white shaft-streaks; lateral bands on crown deep black.
        *a*⁴. No greyish band across the fore neck .. *acuminata*, p. 723.
        *b*⁴. Larger; wing 3·0; a greyish band across the fore neck and chest ..... *lawrencii*, p. 723.
      c'''. Ear-coverts black, without white shaft-streaks, but having a mesial patch of ashy brown; sides of crown black washed with rufous ..... *ruficauda*, p. 724.

b''. A black malar line.
d'''. Larger; culmen 0·7 inch; wing-coverts uniform brown; a black streak above the grey eyebrow ..... *rufescens*, p. 725.
e'''. Smaller; culmen 0·55 inch; wing-coverts chestnut, with black centres; no black line above the grey eyebrow ..... *sumichrasti*, p. 726.
b'. Edge of wing pale yellow; ear-coverts uniform light ashy grey ..... *stolzmanni*, p. 727.
b. With black on throat or fore neck.
c'. Throat white; a black collar across the fore neck *humeralis*, p. 727.
d'. Throat black; fore neck grey.
c''. Bill blackish, lower mandible yellow; back streaked with black; a white cheek-stripe . *mystacalis*, p. 728.
d''. Bill entirely yellow; back uniform; no white cheek-stripe ..... *pulchra*, p. 729.

1. Hæmophila superciliosa.

Aimophila superciliosa, *Swains. An. in Menag.* p. 314 (1837); *id. Classif. B.* ii. p. 287 (1837); *Bp. Consp.* i. p. 486 (1850).
Embernagra superciliosa, *Gray, Hand-l. B.* ii. p. 91, no. 7344 (1870).
Hæmophila superciliosa, *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 395, tab. xxx. fig. 1 (1886).

Adult male. General colour above reddish brown, strongly streaked with black centres to the feathers of the mantle and back, which have whitish edges; lower back and rump also mottled with black centres to the feathers; scapulars like the back; lesser wing-coverts uniform reddish brown, with whitish margins at the ends; median and greater coverts black, externally reddish brown, edged with white at the ends, the greater series margined with hoary grey or white; bastard-wing blackish, edged with white; primary-coverts and quills dusky brown, externally margined with light ashy or fulvous, the secondaries with rufous; upper tail-coverts like the back; tail-feathers blackish, externally edged with whitish or ashy, the centre feathers lighter brown, black along the middle, the outer ones pale brown externally, whitish towards the end of the inner web; crown of head chestnut, streaked with black, with indications of a pale mesial band down the centre of the crown; lores and a broad eyebrow creamy white; feathers in front of and below the eye as well as the ear-coverts black, the latter streaked with white, except on the upper margin; eyelid white; cheeks creamy white; throat white; sides of neck ashy grey, streaked with black; fore neck and breast ashy grey, the abdomen whiter; sides of upper breast with a few black streaks; sides of body and flanks ashy, browner towards the latter, where there are a few black spots and streaks; thighs ashy; under tail-coverts white with black centres; under wing-coverts whitish with black bases; axillaries ashy fulvous; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·65, wing 3, tail 2·6, tarsus 0·95.

Adult female. Similar in plumage to the male. Total length 6·1 nches, culmen 0·65, wing 3·05, tail 2·5, tarsus 1.

Hab. Mexico.

a. Ad. sk.	Mexico.	Purchased.
b, c. Ad. sk.	Mexico.	Sclater Coll.
d. Ad. sk.	Mexico.	J. Gould, Esq.
e. Ad. sk.	Mexico.	Salvin-Godman Coll.
f. Ad. sk.	Mexico (*Boucard*).	Salvin-Godman Coll.
g, h. ♂ ♀ ad. sk.	Ciudad Durango, Mexico, June (*A. Forrer*).	Salvin-Godman Coll.

2. Hæmophila acuminata.

Fringilla acuminata, *Licht. MSS. in Mus. Berol.*
Aimophila acuminata, *Licht. Nomencl. Av. Neotr.* p. 43 (1854).
Zonotrichia melanotis (*nec Bp.*), *Lawr. Ann. Lyc. N. Y.* viii. p. 473 (1866); *id. Proc. Philad. Acad.* 1868, p. 430.
Hæmophila melanotis, *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin, P. Z. S.* 1883, p. 422.
Aimophila melanotis, *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874).
Hæmophila acuminata, *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 397 (1886).

Adult. General colour above rufous-brown, all the feathers streaked with black, and shaded with brighter rufous; lower back, rump, and upper tail-coverts more uniform rufous-brown, the latter with dusky tips; scapulars light chestnut, with black streaks; lesser wing-coverts light chestnut; median and greater coverts blackish, edged with ashy white, before which is a rufous shade; bastard-wing dark brown with ashy margins; primary-coverts and quills dark brown, edged with pale rufous-brown, more distinctly rufous on the secondaries, the innermost of which have broader pale margins; tail-feathers brown, with paler edges and dusky centres, especially on the centre ones; crown of head white along the centre, with a broad band of black along each side of the crown; lores and a broad eyebrow white; feathers round eye and below the latter as well as the ear-coverts black; cheeks, throat, and under surface of body white with a creamy tinge; sides of neck ashy grey like the hind neck, and streaked with black; a patch of rufous on the sides of the upper breast; sides of body, flanks, and under tail-coverts pale sandy buff; thighs white, sandy buff externally; under wing-coverts and axillaries pale sandy buff; quills below dusky, ashy rufous along the inner edge. Total length 6 inches, culmen 0·6, wing 2·6, tail 2·85, tarsus 0·85.

Hab. Mexico.

a. ♂ ad. sk.	Quantepec, Mexico (*Deppe*).	Sclater Coll.
b. Ad. sk.	18 leagues from Puebla towards Chiatla, Mexico (*Rébouch*).	Salvin-Godman Coll.
c. Ad. sk.	Acapulco, Mexico, March 1880 (*A. H. Markham*).	Salvin-Godman Coll.

3. Hæmophila lawrencii.

Hæmophila ruficauda (*nec Bp.*), *Lawr. Bull. U. S. Nat. Mus.* no. 4, p. 22 (1874).
Hæmophila lawrencii, *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 397 (1886).

Adult (type of species). Similar to *H. ruficauda*, but having the ear-coverts entirely black, the lateral bands on the crown also deep black. Total length 7·3 inches, culmen 0·7, wing 3, tail 3·4, tarsus 0·9.

Hab. Western Mexico.

a. Ad. sk.	Juchitan, Tehuantepec, 1870 (*F. Sumichrast*).	April 13,	Salvin-Godman Coll. (Type of species.)

4. Hæmophila ruficauda.

Chondestes ruficauda, *Bp. C. R.* xxxvii. p. 918 (1854).
? Hæmophila tolteca, *Müll. Syst. Verz. Wirb. Mex.* p. 50.
Hæmophila ruficauda, *Scl. & Salv. Ibis*, 1860, p. 398; *Scl. Cat. Amer. B.* p. 118 (1862); *Salvin, Ibis*, 1870, p. 114; *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 22 (1876); *Nutting & Ridgw. Proc. U.S. Nat. Mus.* vi. p. 383 (1884); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 396, tab. xxx. fig. 2 (1886).
Calamospiza ruficauda, *Gray, Hand-l. B.* ii. p. 111, no. 7671 (1870).
Embernagra ruficauda, *Gray, t. c.* p. 91, no. 7345 (1870).
Embernagra tolteca, *Gray, t. c.* p. 91, no. 7346 (1870).

Adult. General colour above light brown, washed with ashy on the mantle and upper back, which are streaked with black; the lower back and rump more uniform and paler brown; scapulars chestnut, with black shaft-streaks; lesser wing-coverts light chestnut; median coverts black, externally chestnut, and edged with white at the ends; greater coverts blackish, externally ashy or pale rufous, inclining to whitish near the ends of the feathers; bastard-wing and primary-coverts blackish, edged with rufous; primary-coverts blackish, edged with rufous; quills blackish, edged with ashy brown, the secondaries with rufous, whiter round the margins of the innermost; upper tail-coverts pale rufous, with whitish fringes; tail-feathers dusky brown, with rufous margins and pale tips, the two centre ones almost entirely pale rufous with dusky centres; crown of head black along the sides, washed with rufous, the centre of the crown with a broad white streak to the nape; lores and a broad eyebrow creamy white, as well as the feathers round the eye; feathers in front of the latter and ear-coverts black, the latter with a central patch of pale ashy brown, and mottled with fulvous on the hinder margin; cheeks and throat pure white; sides of neck ashy brown; fore neck entirely ashy grey; breast and abdomen white; sides of body, flanks, and under tail-coverts pale sandy brown; thighs sandy brown, rufous externally; under wing-coverts and axillaries pale sandy buff; quills below dusky, ashy rufous along the inner edge. Total length 7 inches, culmen 0·65, wing 2·95, tail 3·1, tarsus 0·9.

Hab. Guatemala, Nicaragua, and Costa Rica.

a. Ad. sk.	Choacus, Guatemala (*O. S.*).	Feb. 24, 1860	Salvin-Godman Coll.
b. Ad. sk.	Choacus (*O. S.*).		Sclater Coll.
c. ♀ ad. sk.	Costa Rica (*J. Carmiol*).		Salvin-Godman Coll.

5. Hæmophila rufescens.

Pipilo rufescens, *Swains. Phil. Mag.* new ser. i. p. 434 (1827); *Bp. Consp.* i. p. 487 (1850).

Aimophila rufescens, *Swains. An. in Menag.* p. 313 (1837); *Bp. Consp.* i. p. 486 (1850); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869).

Embernagra pyrgitoides, *Lafr. Rev. Zool.* 1839, p. 97.

Hæmophila rufescens, *Cab. Mus. Hein.* Th. i. p. 132 (1850); *Scl. P. Z. S.* 1858, p. 98, 1859, pp. 365, 380; *id. & Salv. Ibis*, 1859, p. 18, 1860, p. 34; *Scl. Cat. Amer. B.* p. 118 (1862); *Dugès, La Nat.* p. 140 (1868); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 22 (1876); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 395, pl. xxix. fig. 2 (1886).

Geospizopsis melanotis, *Bp. C. R.* xlii. p. 955 (1856); *Scl. P. Z. S.* 1856, p. 306.

Embernagra rufescens, *Gray, Hand-l. B.* ii. p. 91, no. 7343 (1870).

Adult. General colour above rufous-brown, rather clearer brown on the lower back and rump, which are nearly uniform; the mantle and upper back mesially streaked with black; lesser and median coverts like the back, with pale fulvous edges to the tips; greater coverts more decidedly rufous, paler brown on the edges and tips; bastard-wing blackish with hoary grey edges; primary-coverts dusky brown, externally rufous; quills dusky brown, edged with rufous, the secondaries externally chestnut, the innermost secondaries with pale tips; upper tail-coverts like the back, fringed with fulvous at the ends; tail-feathers rufous, rather browner on the inner web; crown of head deep chestnut, forming two lateral bands, divided by an ashy streak down the centre of the crown, which widens out into a broad ashy band on the hind neck, on the sides of which the chestnut bands are continued from the crown and are streaked with black; lores whitish, continued into a distinct ashy eyebrow, which is separated from the chestnut crown by a line of black; eyelid white, with a dusky spot in front of the eye; ear-coverts and sides of face dull ashy with an ochreous tinge; the feathers below the eye and a line along the upper edge of the ear-coverts black; cheeks and throat pale ochreous, separated by a broad malar line of black; sides of neck ashy; abdomen pure white; fore neck and breast pale ochreous, deepening into rich ochreous brown on the sides of the body, flanks, and under tail-coverts; thighs brown externally, ashy brown internally; under wing-coverts and axillaries ashy whitish, washed with ochre; quills below dusky, ashy along the inner edge. Total length 6·4 inches, culmen 0·7, wing 2·9, tail 2·9, tarsus 1.

There is considerable variation in size in this species, males having the wing from 2·6–3 inches. The sexes are alike in colour. The nesting plumage appears to be rather darker, the mesial streak on the crown becomes almost obsolete, and the under surface of the body is more ashy and less ochreous.

Young. Darker than the adult, with the crown blackish, without much rufous and thickly streaked with black; the eyebrow, sides of face, and under surface of body washed with olive-yellow, more

tawny on the flanks, which are streaked with dusky blackish, while the throat and breast are streaked with black.

Hab. Central America from Mexico to Guatemala.

a. Ad. sk.	Mexico.	Sclater Coll.
b. Ad. sk.	Mexico.	Purchased.
c, d. Ad.; *e.* Juv. sk.	Orizaba (*Botteri*).	Sclater Coll.
f. Ad. sk.	Orizaba (*Boucard*).	Salvin-Godman Coll.
g. Ad. sk.	Jalapa (*C. F. Höge*).	Salvin-Godman Coll.
h. Ad.; *i.* Juv. sk.	Guatemala (*G. U. Skinner*).	J. Gould, Esq.
k. Ad. sk.	Vera Paz (*Hague*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Dueñas, Guatemala, Aug. 24, 1859 (*O. S.*).	Salvin-Godman Coll.
m. Jnv. sk.	Dueñas (*O. S.*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Dueñas, July 18, 1859 (*O. S.*).	Sclater Coll.
o. ♀ ad. sk.	Volcan de Fuego (*O. S.*).	Sclater Coll.
p. ♂ ad. sk.	Volcan de Fuego, Sept. 1873 (*O. S.*).	Sclater Coll.
q. ♂ ad. sk.	Pine-ridge of Poctum, March 1862 (*O. S.*).	Salvin-Godman Coll.
r, s. Ad. st.	Mexico.	Purchased.

6. Hæmophila sumichrasti.

Hæmophila sumichrasti, *Lawr. Ann. Lyc. N. Y.* x. p. 6 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 22 (1876); *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 395 (1886).

Adult. General colour above ashy grey, the feathers of the mantle and back broadly streaked with black, the feathers being rufous laterally; lower back and rump more uniform and sandy brown; scapulars chestnut with black centres; lesser wing-coverts uniform bright chestnut; median coverts black, the outer ones chestnut, the inner ones like the greater coverts blackish, externally sandy buff, whiter towards their ends; bastard-wing blackish, edged with white; primary-coverts and quills blackish, edged with ashy rufous, hoary whitish on the margins of the primaries; upper tail-coverts pale tawny rufous; tail-feathers dusky brown, externally pale tawny rufous, lighter on the outer feathers towards their ends; crown of head ashy grey, mottled with rufous centres to the feathers, which have also black shafts; lores white, extending into an eyebrow of pale ashy grey; eyelid white; ear-coverts pale ashy, with a dark rufous or blackish line along the upper margin; cheeks white, becoming ashy grey on the hinder part, with a narrow blackish streak above the white portion; throat white, separated from the cheeks by a black malar line; sides of neck ashy grey, slightly spotted; lower throat, fore neck, and sides of the breast light ashy; centre of breast and abdomen white; sides of body, flanks, and under tail-coverts clear sandy buff; thighs browner; under wing-coverts and axillaries white; quills below dusky, ashy whitish along the inner edge: "upper mandible brown, lower

mandible fleshy; feet fleshy; iris brownish red" (*Sumichrast*) Total length 6 inches, culmen 0·55, wing 2·55, tail 2·5, tarsus 0·75

The specimen from Oaxaca is rather more ochreous below than the two from Tehuantepec, and slightly more rufous above. This difference may be seasonal.

Hab. Mexico.

a. ♂ ad. sk.	Juchitan, Tehuantepec, April 8, 1870 (*F. Sumichrast*).	Salvin-Godman Coll.
b. Ad. sk.	Juchitan, April 20, 1871 (*F. Sumichrast*).	Sclater Coll.
c. ♀ ad. sk.	Oaxaca (*A. Boucard*).	Sclater Coll.

7. Hæmophila stolzmanni.

Hæmophila stolzmanni, *Tacz. P. Z. S.* 1877, p. 322, pl. 36. fig. 2; *id. Orn. Pérou*, iii. p. 47 (1886).

Adult male. General colour above ashy brown, streaked with black on the mantle and back, the feathers of which have a slight reddish tinge; lower back, rump, and upper tail-coverts more uniform and lighter brown; scapulars chestnut, with black streaks; lesser wing-coverts uniform bright chestnut; median and greater coverts blackish, edged with rufous or hoary white, especially at the tips; bastard-wing blackish, with a greyish-white margin; primary-coverts and quills blackish, edged with ashy brown, whiter on the ends of the primaries, the secondaries more rufous, the innermost white towards the ends; tail-feathers dark brown, with lighter brown margins, the outer ones paler at the end of the outer web, and fringed with white at the tip; crown of head light ashy along the centre, with a broad lateral band of rufous, minutely streaked with black, the fore part of these lateral bands black at the base, above the lores, with a white line near the base of the bill; eyebrow pale ashy grey, the lores and eyelid white; sides of face and ear-coverts pale ashy grey, with a broad streak of rufous above the latter; fore part of cheeks white, the hinder part ashy grey, with a small black line above the white portion of the cheeks; sides of neck ashy grey; throat white, separated from the cheeks by a line of dusky black; breast and abdomen white, with a slight shade of dull ashy across the fore neck; sides of body and flanks washed with pale brown; thighs and under tail-coverts white; under wing-coverts and axillaries white, edged with bright yellow; edge of wing bright yellow; quills below dusky, ashy along the inner edge: "bill horny blackish, lower mandible bluish grey; feet yellowish grey; iris reddish brown" (*Stolzmann*). Total length 5·9 inches, culmen 0·65, wing 2·75, tail 2·25, tarsus 0·8.

Hab. Peru.

a. ♂ ad. sk.	Tumbez, Peru (*Jelski*).	Sclater Coll.

8. Hæmophila humeralis.

Hæmophila humeralis, *Cab. Mus. Hein.* Th. i. p. 132 (1850, *ex Licht. MSS.*); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 398, pl. 29. fig. 1 (1886).

Aimophila humeralis, *Licht. Nomencl. Av. Berol.* p. 43 (1854).
Embernagra humeralis, *Gray, Hand-l. B.* ii. p. 91, no. 7347 (1870).
Amphispiza ferrariperazi, *Ridgw. Auk*, iii. p. 332 (1886).

Adult. General colour above bright chestnut, the upper back and mantle with mesial streaks of black; lower back and rump lighter rufous, washed with brown; scapulars chestnut; lesser wing-coverts also chestnut; median coverts black, edged with white at the ends; greater coverts black, externally pale reddish brown, washed with ashy white at the ends; bastard-wing black, margined with white; primary-coverts and quills dusky brown, edged with ashy brown, rather more rufous on the secondaries, the innermost of which are whitish at the ends; upper tail-coverts dusky brown, edged with whitish at the tips; tail-feathers dusky brown, edged with ashy brown, the outer ones paler towards the ends, which are tipped with white; crown of head sooty black, inclining to brown on the hind neck and sides of neck; lores white; remainder of sides of face and ear-coverts sooty black; cheeks and throat white, separated by a broad malar line of black, which joins the sides of neck; sides of throat, fore neck, and chest black; breast and abdomen white; sides of body and flanks pale brown, the latter light sandy buff like the thighs and under tail-coverts; under wing-coverts and axillaries ashy white; quills below dusky, ashy along the inner edge. Total length 6 inches, culmen 0·55, wing 2·6, tail 2·8, tarsus 0·75.

A second specimen, probably a female, has the head and neck decidedly browner, and the black band on the fore neck narrower. Total length 6 inches, culmen 0·55, wing 2·6, tail 2·55, tarsus 0·8.

Hab. Mexico.

a. Ad. sk.	18 leagues from Pueblo, towards Chiatla (*E. Rébouch*).	Sclater Coll.
b. Ad. sk.	Mexico (*Boucard*).	Salvin-Godman Coll.

9. Hæmophila mystacalis.

Zonotrichia mystacalis, *Hartl. Rev. Zool.* 1852, p. 3; *Scl. P. Z. S.* 1856, p. 305, 1859, p. 379; *Gray, Hand-l. B.* ii. p. 94, no. 7385 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Lawr. Proc. U.S. Nat. Mus.* i. p. 21 (1876).
Amphispiza mystacalis, *Ridgw. Ibis*, 1883, p. 400.
Hæmophila mystacalis, *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 399 (1886).

Adult male. General colour above brown, slightly tinged with rufous on the back, the feathers of which are broadly streaked with mesial black centres; scapulars, lower back, and rump bright chestnut or cinnamon-rufous; upper tail-coverts also chestnut, dusky brown towards the ends, which are margined with ashy; wing-coverts black, the lesser ones edged with ashy, the median and greater series broadly tipped with white, forming a distinct double wing-bar; bastard-wing feathers black, narrowly fringed with white; primary-coverts and quills black, edged externally with ashy, whiter on the primaries, the secondaries more broadly with pale cinnamon-rufous,

like the inner greater coverts; tail-feathers black, narrowly edged with ashy fulvous, the two outer ones paler towards the ends and edged with white, which extends round the top of the outermost feather; head and hind neck more ashy than the back, and streaked with black, broadly on the crown, less distinctly on the hind neck; the forehead blackish, with a tiny streak of white at the base of the bill; a second small streak of white from the base of the nostril over the eye; eyelid white; lores and feathers below the eye black; the ear-coverts dark ashy like the crown, with a narrow line of black along their upper edge; cheeks white, forming a broad band; throat black, with a tiny white chin-spot, and the lower part of the black throat slightly streaked with white; lower throat, fore neck, and chest ashy grey, extending on to the sides of the breast; breast and abdomen white; sides of body pale cinnamon, rather clearer and brighter on the under tail-coverts; thighs white, dusky posteriorly; axillaries and under wing-coverts white, with ashy bases; edge of wing white; quills dusky below, ashy along the edge of the inner web. Total length 6·7 inches, culmen 0·5, wing 2·9, tail 3·3, tarsus 0·8.

Adult female. Similar to the male, but rather paler. Total length 6 inches, culmen 0·55, wing 2·9, tail 3·7, tarsus 0·85.

The winter plumage is brighter than the summer plumage when the feathers get much worn, and the back becomes darker and more closely streaked with black as the light edges to the feathers become abraded.

Hab. Mexico.

a. Ad. sk.	San Juan del Rio, Mexico.	E. Rébouch [C.].
b. ♂ ad. sk.	Puebla.	A. Boucard [C.].
c. ♂ ad. sk.	Oaxaca, March (*A. Boucard*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.
e. Ad. sk.	Mexico.	Sclater Coll.

10. Hæmophila pulchra.

Hæmophila pulchra, *Sclater, Ibis*, 1886, p. 259, pl. viii.

Adult (type of species). General colour above brown, the feathers of the back more or less chestnut at the base; scapulars light chestnut; lesser and median coverts slaty grey; greater coverts chestnut, the outer ones slaty grey, washed with chestnut externally, or slaty grey with hoary grey edges; bastard-wing black, edged with ashy grey; primary-coverts and quills black, edged with ashy grey, more hoary on the primaries, the secondaries with broad margins of chestnut; upper tail-coverts slaty grey; tail-feathers black, margined with ashy, the two outer ones for the most part white, with a longitudinal black mark along the end of the outer web and an oblique black base to the inner web, the black increasing in extent on the penultimate feather, the white on the third feather reduced to a small wedge-shaped mark at the end of the inner web; crown of head and hind neck brown like the back, deepening in colour on the former; base

of forehead and lores black; eyebrow and sides of crown clear slaty grey, like the sides of face and ear-coverts; cheeks also slaty grey, except the fore part, which is black like the throat and lores; sides of neck, lower throat, fore neck, and chest clear slaty grey; remainder of under surface of body creamy buff, the abdomen whiter; thighs pale ashy; under tail-coverts creamy buff like the flanks; under wing-coverts and axillaries pale slaty grey, the lower coverts white; quills below dusky, ashy along the inner edge. Total length 6·4 inches, culmen 0·65, wing 2·8, tail 2·8, tarsus 0·9.

Hab. Peru.

a. Ad. sk. Valley of Rimac, Peru (*W. Nation*). Sclater Coll. (Type of species.)

77. CHAMÆOSPIZA.

	Type.
Chamæospiza, *Scl. P. Z. S.* 1858, p. 304.....	C. torquata.

Range. Mexico.

1. Chamæospiza torquata.

Pipilo torquatus, *Dubus, Bull. Acad. Brux.* xiv. pt. ii. p. 105 (1847); *id. Rev. Zool.* 1848, p. 246; *Bp. Consp.* i. p. 487 (1850); *Dubus, Esq. Orn.* pl. 36 (1851).

Kieneria torquata, *Bp. C. R.* xl. p. 356 (1855).

Chamæospiza torquata, *Scl. P. Z. S.* 1858, p. 304, 1859, p. 365; *id. & Salv. Ibis*, 1860, p. 274; *Scl. Cat. Amer. B.* p. 120 (1862); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 399.

Buarremon ocai, *Lawr. Ann. Lyc. N. Y.* viii. p. 126 (1866).

Emberizoides torquata, *Gray, Hand-l. B.* ii. p. 91, no. 7333 (1870).

Adult male. General colour above dull olive, shaded with brown on the lower back and rump; lesser and median coverts brighter olive-yellow; greater coverts olive-green, externally olive-yellow; bastard-wing dusky, with a yellowish-white margin; primary-coverts dusky, externally olive; quills dusky brown, externally olive, the primaries olive-yellow along the outer web; tail-feathers dull olive-yellow, with glossy dark-brown shafts; crown of head and nape bright chestnut; forehead black, extending in a broad line along the sides of the crown; in the centre of the forehead a broad line of white; lores, eyelid, feathers below the eye, and ear-coverts black; eyebrow white, extending to the sides of the nape, where it is tinged with grey; cheeks and throat white, followed by a large crescentic patch of black on the fore neck; breast and abdomen white, with a slight tinge of olive-yellow on the former; sides of body and flanks light brown, the sides of the upper breast grey, washed with olive-yellow on the sides of the fore neck; thighs ashy brown with an olive tinge; under tail-coverts light fulvous brown; under wing-coverts yellow, very bright on the edge of the wing; axillaries olive-yellow; quills below dusky, edged with ashy on the inner web. Total length 8·2 inches, culmen 0·65, wing 3·6, tail 4, tarsus 1·15.

Adult female. Similar to the male, but not so bright in colour, with indistinct dusky tips to the feathers of the chestnut crown. Total length 7·5 inches, culmen 0·7, wing 3·3, tail 3·5, tarsus 1·15.

One of the female birds from Oaxaca has the thighs ashy grey.

Young. Differs from the adult in being altogether browner, with scarcely any indications of the chestnut crown; the white mesial streak on the forehead also nearly obsolete; throat, breast, and abdomen isabelline, the sides of the body entirely pale brown.

Hab. Mexico.

a. Juv. sk.	S. Mexico (*de Oca*).	Sclater Coll.
b. ♂ ad. sk.	La Parada, Mexico.	A. Boucard [C.].
c. ♀ ad. sk.	Oaxaca (*Boucard*).	Sclater Coll.
d, *e*. ♀ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.

78. PYRGISOMA.

	Type.
Pyrgisoma, *Bp. C. A.* i. p. 486 (1850)	P. biarcuatum.
Melozone, *Reichenb. Syst. Nat.* pl. lxxix. fig. 10 (1850)	P. biarcuatum.
Kieneria, *Bp. C. R.* xl. p. 356 (1855)	P. kieneri.

Range. Throughout Central America, reoccurring in Peru.

Key to the Species.

a. Crown and nape chestnut; forehead black or ashy.
  a'. Forehead ashy; ear-coverts ashy brown, with chestnut behind and below ..... *rubricatum*, p. 731.
  b'. Similar to *P. rubricatum*, but larger; no white ring round the eye; top of head brown like the back, not chestnut ..... *kieneri*, p. 732.
  c'. Forehead black; no black under the eye, which is white all round; ear-coverts dark chestnut, black anteriorly; sides of neck white behind the ear-coverts; no black spot on the fore neck ..... *biarcuatum*, p. 733.
  d'. Forehead black; feathers below the eye black; ear-coverts chestnut, black anteriorly; sides of neck black behind the ear-coverts; a black spot on the fore neck ..... *cabanisi*, p. 734.
b. No chestnut on the head.
  e'. Throat entirely black; abdomen white; hind neck olive-yellow.
    a''. Crown of head grey, with lateral black bands; a spot on the fore neck, separated by a white collar from the black throat.... *occipitale*, p. 735.
    b''. Crown of head blackish, with no grey; throat and fore neck entirely black..... *leucote*, p. 736.
  f'. Throat white, with some black on the chin; abdomen bright tawny like the under tail-coverts; no yellow on the hind neck ..... *nationi*, p. 736.

1. Pyrgisoma rubricatum.

Tanagra rubricata, *Licht. MSS. in Mus. Berol., undè*
Atlapetes rubricatus, *Cab. Mus. Hein.* Th. i. p. 140 (1850); *id. J. f. O.* 1860, p. 413.

Pipilo rubricatus, *Licht. Nomencl. Av. Berol.* p. 44 (1854).
Melozone rubricata, *Cab. J. f. O.* 1866, p. 234.
Pyrgisoma xantusi, *Lawr. Ann. Lyc. N. Y.* viii. p. 480 (1866, *ex Baird MSS.*).
Pyrgisoma rubricatum, *Scl. & Salv. P. Z. S.* 1868, p. 326; *iid. Exot. Orn.* p. 127, pl. 64. fig. 1 (1868); *iid. Nomencl. Av. Neotr.* p. 33 (1873); *Lawr. Mem. Bost. Soc.* ii. p. 278 (1874); *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 402 (1886).
Embernagra rubricata, *Gray, Hand-l. B.* ii. p. 92, no. 7353 (1870).

Adult male. General colour above brown, inclining slightly to olive-brown; lesser wing-coverts dull ashy grey; median and greater coverts dusky, edged with olive-brown, the former series paler on the tips; bastard-wing blackish, edged externally with white; primary-coverts and quills dusky brown, externally edged with ashy, the secondaries browner on the outer web; upper tail-coverts like the back; tail-feathers dusky brown, washed with ashy on the margins; forehead and sinciput brown, the hinder crown and nape bright chestnut or bay, extending down behind the ear-coverts and widening again on the hinder cheeks; lores blackish, surmounted by a white spot; a tiny whitish spot in the middle of the forehead; eyelid white; ear-coverts brown; the feathers below the eye blackish, extending on to the fore part of the ear-coverts; cheeks, throat, and under surface of body white, with a narrow line of black spots on the malar line; on the fore neck a spot of black; sides of body and flanks brown; thighs white, dark ashy posteriorly; under tail-coverts tawny; under wing-coverts and axillaries white, the latter with dusky bases; quills below dusky, ashy along the inner edge. Total length 7 inches, culmen 0·55, wing 3·2, tail 2·85, tarsus 0·85.

Adult female. Similar to the male, but a little more dingy in colour; the black spots on the malar line absent. Total length 6·6 inches, culmen 0·55, wing 3, tail 2·8, tarsus 0·9.

Young. Duller olive-brown than the adults; the white of the underparts sullied by dusky tips to the feathers; centre of the abdomen washed with olive-yellow.

Hab. Mexico.

a.	Ad. st.	Mexico.	Purchased.
b.	Ad. sk.	Mazatlan (*J. Xanthus*; Sm. no. 23869).	Salvin-Godman Coll. (A type of *P. xanthusi.*)
c.	♂ ad. sk.	Presidio, May 1 (*A. Forrer*).	Salvin-Godman Coll.
d.	Ad. sk.	Presidio, Dec. 31 (*A. F.*).	Salvin-Godman Coll.
e.	♂ ad. sk.	Putla, May 1, 1871 (*A. Boucard*).	Sclater Coll.
f.	♀ ad. sk.	Atlisco (*A. Boucard*).	Sclater Coll.
g.	♂ ad. sk.	Atlisco (*A. Boucard*).	Salvin-Godman Coll.

2. Pyrgisoma kieneri.

Pyrgisoma kieneri, *Bp. Consp.* i. p. 486 (1850); *Scl. & Salv. P. Z. S.* 1868, p. 325; *iid. Exot. Orn.* p. 130, pl. 65. fig. 2 (1868); *iid. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 401 (1886).

Adult. Dusky brown, the crown and sides of the head rufous; ear-coverts uniform with the back, the tips of the feathers, however, chestnut; lores whitish; forehead and cheeks dusky black; under surface of body white, the flanks like the back; an indistinct pectoral spot of black; vent rufescent; bill blackish horn-colour; feet pale hazel-brown. Total length 7·3 inches, wing 3·3, tail 2·9, tarsus 1. (*Salvin & Godman, l. c.*)

Hab. Mexico?

3. Pyrgisoma biarcuatum.

Pyrgita biarcuatus, *Prév. & Des Murs, Voy. Vénus, Atlas,* pl. 6 (1846).

Emberiza biarcuata, *iid. Voy. Vénus,* v. *Ois.* p. 216 (1855).

Pyrgisoma biarcuatum, *Bp. Consp.* i. p. 486 (1850); *Scl. & Salv. Ibis,* 1859, p. 18; *Scl. Cat. Amer. B.* p. 120 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salv. Cat. Strickl. Coll.* p. 234 (1882); *id. & Godman, Biol. Centr.-Amer., Aves,* i. p. 401 (1886).

Embernagra biarcuata, *Gray, Hand-l B.* ii. p. 92, no. 7349 (1870).

Adult. General colour above brown; lesser wing-coverts ashy, washed with brown; median and greater coverts dusky brown, washed externally with brown like the back, with paler tips of buffy whitish; bastard-wing dusky brown, with ashy whitish edges; primary-coverts dusky brown; quills dusky brown, externally lighter brown, somewhat ashy on the primaries, the secondaries rather more reddish brown externally; upper tail-coverts like the back; tail-feathers dusky brown, washed externally with lighter brown; crown of head and nape bright chestnut, the forehead black; lores, eyebrow, and feathers round eye creamy white, extending behind the latter; ear-coverts deep chestnut, black anteriorly; feathers below the eye and cheeks creamy white, extending upwards behind the ear-coverts; sides of neck dark ashy; throat, fore neck, breast, and abdomen creamy white; sides of body and flanks brown, ashy along the sides of the fore neck and upper breast; thighs dark ashy, white posteriorly; under tail-coverts pale tawny buff; under wing-coverts and axillaries white, the latter with dusky bases; quills below dusky, ashy fulvous along the inner edge. Total length 6·3 inches, culmen 0·55, wing 2·8, tail 2·7, tarsus 1.

Young. Entirely brown above, the feathers mottled with blackish edges, the head slightly rufescent towards the nape, where the chestnut crown of the adult is indicated; wing-coverts dusky, externally rufescent brown, with paler spots at the ends; quills externally rufous-brown, especially marked on the secondaries; facial markings as in the adult, but strongly tinged with yellow, as is also the under surface of the body; the fore neck and breast brown, mottled with blackish edges to the feathers; bill yellow, blackish near the base of the culmen.

Hab. Guatemala.

a. Ad. st.	Guatemala.	Purchased.
b. Ad. sk.	Guatemala (*G. U. Skinner*).	J. Gould, Esq.

c. Ad. sk.	Guatemala.	Purchased.
d. Ad. sk.	Guatemala (*Skinner*).	Sclater Coll.
e. Ad. sk.	Dueñas, Oct. 1861 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
f. Imm. sk.	Dueñas, July 31, 1873 (*O. S.*).	Salvin-Godman Coll.
g. ♂ juv. sk.	Dueñas, July 31, 1859 (*O. S.*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Barranco-Hondo, Oct. 29, 1873 (*O. S.*).	Salvin-Godman Coll.
i. Ad. sk.	Retalhuleu, Sept. 1862 (*O. S.*).	Salvin-Godman Coll.
k. Ad. sk.	Coban, Feb. 1862 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
l. ♂ juv. sk.	Coban, Nov. 6, 1859 (*O. S.*).	Salvin-Godman Coll.

4. Pyrgisoma cabanisi.

Melozone biarcuata (*nec Prév. & Des Murs*), *Cab. J. f. O.* 1860, p. 412.

Pyrgisoma kieneri (*nec Bp.*), *Cass. Proc. Philad. Acad.* 1865, p. 169; *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868); *Frantz. J. f. O.* 1869, p. 302.

Pyrgisoma biarcuatum (*nec Prev. & Des Murs*), *Lawr. Ann. Lyc. N. Y.* ix. p. 103; *Frantz. J. f. O.* 1869, p. 301.

Pyrgisoma cabanisi, *Sel. & Salv. P. Z. S.* 1868, p. 324; *iid. Exot. Orn.* p. 129, pl. 65. fig. 1 (1868); *Salv. Ibis*, 1869, p. 314; *Sel. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 403 (1886).

Embernagra kieneri (*nec Bp.*), *Gray, Hand-l. B.* ii. p. 92, no. 7350 (1870).

Embernagra cabanisi, *Gray, t. c.* p. 92, no. 7351 (1870).

Adult male. General colour above brown, slightly tinged with olive, especially on the rump; lesser wing-coverts dark ashy grey; median and greater coverts dusky, with brown edges; bastard-wing and primary-coverts dark brown, fringed with lighter brown; quills dusky brown, the primaries externally dull ashy or ashy whitish, the secondaries brown on the outer web; upper tail-coverts like the back; tail-feathers dark brown, with olive-brown edges; crown of head and nape bright chestnut, separated from the back by the hind neck and sides of neck, which are dark slaty grey; forehead black, washed with grey; lores conspicuously white; eyelid white, excepting a black spot on the upper edge; behind the eye a spot of white; feathers below the eye black, extending on to the fore part of the ear-coverts, which are otherwise bright chestnut; a narrow malar line of black; cheeks, throat, and under surface of body white, with a large black mark on the fore neck; sides of body and flanks ashy grey, browner on the latter; thighs ashy grey; under tail-coverts pale tawny buff; under wing-coverts and axillaries white; quills below dusky, ashy white along the edge of the inner web. Total length 6·3 inches, culmen 0·55, wing 2·75, tail 2·5, tarsus 0·95.

Hab. Costa Rica.

a. Ad. sk.	Costa Rica.	Purchased.
b. Ad. sk.	Costa Rica (*Hoffman*).	Sclater Coll.
c. Ad. sk.	Costa Rica (*Van Patten*).	Salvin-Godman Coll.

d. Ad. sk.	San José, Costa Rica, Oct. 20, 1865 (*J. Carmiol*, Sm. no. 41369).	Salvin-Godman Coll. (Type of species.)
e. ♂ ad. sk.	San José, Costa Rica, April 1877 (*A. Boucard*).	Sclater Coll.
f, *g*. Ad. sk.	Irazu, Costa Rica, Dec. 1877 (*H. Rogers*).	Salvin-Godman Coll.

5. Pyrgisoma occipitale.

Chamæospiza torquata (*nec Dubus*), *Scl. & Salv. Ibis*, 1860, p. 274.
Pyrgisoma leucote (*nec Cab.*), *Salv. Ibis*, 1866, p. 205; *Scl. & Salv. P. Z. S.* 1868, p. 326 (pt.); *iid. Exot. Orn.* p. 128, pl. 64. fig. 2 (1868, pt.); *iid. Nomencl. Av. Neotr.* p. 33 (1873, pt.).
Pyrgisoma occipitale, *Salvin, Ibis*, 1878, p. 446; *id. & Godman, Biol. Centr.-Amer., Aves*, i. p. 404 (1886).

Adult male. General colour above brown, rather more ashy on the upper mantle and inclining to reddish brown on the back; lesser wing-coverts olive-yellow; median coverts dusky with olive-yellow margins; greater coverts dusky, externally olive-yellow, the innermost reddish brown; bastard-wing dusky, externally ashy grey; primary-coverts and quills dusky brown, with olive-yellow edges, the secondaries externally rufous-brown; upper tail-coverts reddish brown; tail-feathers dark rufous-brown, more rufous on the margins; crown of head slaty grey, with a broad band of black along the sides of the crown, the nape slightly washed with olive-yellow, the hind neck entirely olive-yellow, forming an indistinct collar; a tiny streak of white in the centre of the base of the forehead; lores and eyelid white, with a black anterior mark on the latter; above the ear-coverts a streak of bright yellow joining the sides of the neck, which are also bright yellow; ear-coverts, cheeks, and throat black, with a large white spot on the ear-coverts; centre of body white from the throat downwards; fore neck with a large black patch; sides of fore neck and upper breast slaty grey; sides of body and flanks brown; thighs ashy grey; under tail-coverts light rufous; under wing-coverts and axillaries olive-yellow, brighter yellow on the edge of the wing; quills below dusky, ashy along the inner edge. Total length 7·5 inches, culmen 0·7, wing 3·4, tail 3·15, tarsus 1·05.

Adult female. Similar to the male but a little duller in colour. Total length 6·8 inches, culmen 0·65, wing 3·1, tail 3, tarsus 1·05.

Young. Much browner than the adults, the head brown, mottled, like the olive-yellow hind neck, with blackish edges to the feathers; the wing-coverts pale reddish at the ends; facial markings as in the adult, but the black much more dusky, and the throat dusky blackish; the white breast washed with pale olive-yellow.

Hab. Guatemala.

a. Ad. sk.	Guatemala.	Osbert Salvin, Esq. [P.].
b, *c*. ♂ ♀ ad. sk.	Volcan de Fuego Sept. and Oct. 1873 (*O. S.*).	Sclater Coll.
d. ♂ imm. sk.	Volcan de Fuego, Sept. 5, 1859 (*O. S.*).	Salvin-Godman Coll.

e. ♀ ad. sk.	Volcan de Fuego, Oct. 23, 1873 (*O. S.*).	Salvin-Godman Coll.
f, *g*. Ad. sk.	Savana Grande (*O. S. & F. D. G.*).	Salvin-Godman Coll. (Types of species.)
h. ♂ ad. sk.	Volcan de Agua, Nov. 1873 (*O. S.*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Barranco Hondo, Oct. 29, 1873 (*O. S.*).	Salvin-Godman Coll.

6. Pyrgisoma leucote.

Melozone leucotis, *Cab. J. f. O.* 1860, p. 413; *Cass. Proc. Philad. Acad.* 1865, p. 169; *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868); *Frantz. J. f. O.* 1869, p. 302.

Pyrgisoma leucote, *Scl. & Salv. P. Z. S.* 1868, p. 326; *iid. Exot. Orn.* p. 128 (1868, pt.); *Scl. Ibis*, 1873, p. 373; *id. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 403 (1886).

Embernagra leucotis, *Gray, Hand-l. B.* ii. p. 92, no. 7352 (1870).

Adult male. Similar to *P. occipitale*, but without the grey on the crown, the entire crown being black, washed on the nape with olive-green like the hind neck; the entire throat and fore neck black, mottled on the lower throat with half-concealed white bases to the feathers. Total length 6·8 inches, culmen 0·6, wing 3·1, tail 2·65, tarsus 1·05.

Hab. Nicaragua and Costa Rica.

a. Ad. sk.	Chontales, Nicaragua (*T. Belt*).	Salvin-Godman Coll.
b. Juv. sk.	Costa Rica (*Hoffman*).	Sclater Coll. (A typical specimen.)
c. Ad. sk.	Costa Rica (*Boucard*).	Sclater Coll.
d. Ad. sk.	Costa Rica.	Mr. Van Patten [C.].
e. ♂ ad. sk.	San José, Costa Rica, Oct. 20, 1865 (*J. Carmiol*; Sm. no. 47461).	Salvin-Godman Coll.
f, *g*, *h*. Ad. sk.	Irazu district, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.

7. Pyrgisoma nationi.

Pipilo mystacalis, *Tacz. P. Z. S.* 1874, p. 521 (*nec* Buarremon mystacalis, *Tacz. P. Z. S.* 1874, p. 515).

Buarremon nationi, *Scl. P. Z. S.* 1881, p. 485, pl. xlvi.; *Tacz. Orn. Pérou*, ii. p. 533 (1884).

Adult female (type of species). General colour above ashy grey, rather browner on the back; wing-coverts like the back, with paler brown tips to the greater series; bastard-wing, primary-coverts, and quills dark brown, edged with ashy, the first primary externally white; upper tail-coverts ashy grey, with fulvous-brown tips; tail-feathers dusky brown, edged with ashy, the outer ones narrowly tipped with whitish; crown of head and nape dark chocolate-brown, with a few white feathers on the forehead and on the sides of the hinder crown; lores, feathers round eye, and ear-coverts black, the latter washed with brown; cheeks and throat white, the former washed with deep ochre; chin black, extending a short distance down the malar line; sides of neck ashy grey, washed with brown; fore neck ashy grey, varied with whitish edges to the feathers; breast, abdomen, thighs, and under tail-coverts pale tawny

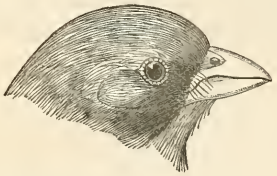
buff; sides of body and flanks ashy grey, slightly washed with brown; under wing-coverts and axillaries white, with a slight tinge of tawny; quills below dusky, ashy white along the edge of the inner web: "bill blackish; feet horn-colour; iris reddish brown" (*Jelski*). Total length 7·8 inches, culmen 0·65, wing 3·4, tail 3·35, tarsus 1·15.

Hab. Peru.

a. ♀ ad. sk.	Western Cordillera of Peru (*W. Nation*).	Sclater Coll.	(Type of species.)

79. SALTATRICULA.

Saltatricula, *Burm. Reis. La Plata-St.* ii. p. 481 (1861). Type. S. multicolor.



Head of *Saltatricula multicolor*.

Range. Western Argentine Republic.

1. Saltatricula multicolor.

Saltator multicolor, *Burm. J. f. O.* 1860, p. 254; *Cab. J. f. O.* 1878, p. 195; *Gray, Hand-l. B.* ii. p. 75, no. 7100 (1870).
Saltatricula multicolor, *Burm. Reis. La Plata-St.* ii. p. 481 (1861); *Salvin, Ibis*, 1880, p. 355; *White, P. Z. S.* 1882, p. 600.

Adult male. General colour above brown, the lower back, rump, and upper tail-coverts ashy grey; lesser wing-coverts ashy grey; median coverts dusky brown, margined with ashy grey; greater coverts dusky brown, externally brown like the back; bastard-wing and primary-coverts dark brown, edged with ashy brown; quills dark brown, the primaries edged with ashy, the secondaries with brown, more rufescent along the outer web; centre tail-feathers ashy brown, the remainder black, broadly tipped with white, increasing towards the outer feather, which is also white along the outer web; crown of head like the back; a narrow black line across the base of the forehead, followed by a shade of grey; lores black as well as the feathers below the eye; eyelid white; ear-coverts ashy grey, with a broad streak of white above them; feathers below the eye and cheeks black, extending on to the fore part of the ear-coverts and down the sides of the throat; entire throat white; sides of neck light ashy grey, extending downwards on to the fore neck; breast, sides of body, and flanks light tawny rufous; abdomen and lower breast white; thighs ashy, with white edges; under tail-coverts white; under wing-coverts and axillaries ashy grey, the lower series whiter; the outer coverts dusky brown, forming a

patch; quills below dusky brown, ashy whitish along the inner edge: "upper mandible dark brown, lower mandible pale yellow; legs and feet slate-colour; iris light brown" (*H. Durnford*). Total length 6·6 inches, culmen 0·5, wing 2·9, tail 3·25, tarsus 0·85.

Adult female. Similar in colour to the male. Total length 6·3 inches, culmen 0·5, wing 2·8, tail 3, tarsus 0·9.

Hab. The same as that of the genus.

a. ♀ ad.; *b*, *c*. Ad. sk.	Salta, June 1878.	Henry Durnford, Esq. [C.].
d. ♂ ad. sk.	Cosquin, Cordova, Argentine Republic, Aug. 16, 1882 (*E. W. White*).	Salvin-Godman Coll.]
e. ♂ ad. sk.	Cosquin, June 15 (*E. W. White*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Mendoza, Feb. 1871 (*Weisshaupt*).	Salvin-Godman Coll.
g, *h*. ♂ ad. sk.	Mendoza, Feb. 1871 (*Weisshaupt*).	Sclater Coll.

80. ATLAPETES.

	Type.
Atlapetes, *Wagler*, *Isis*, 1831, p. 526	A. pileatus.
Chlorura, *Sclater*, *Cat. Amer. B.* p. 117 (1862)	A. chlorurus.

Foot of *Atlapetes pileatus*.

Range. Southern United States and Mexico.

Key to the Species.

a. Larger: throat white as well as the abdomen; fore neck and breast ashy grey ..... *chlorurus*, p. 738.
b. Smaller: throat, breast, and abdomen yellow; sides of body olive ..... *pileatus*, p. 740.

1. Atlapetes chlorurus.

Fringilla chlorura, *Towns. in Audub. Orn. Biogr.* v. p. 336 (1839).
Fringilla blandingiana, *Gambel, Proc. Philad. Acad.* i. p. 260 (1843).
Zonotrichia chlorura?, *Gambel, Journ. Philad. Acad.* i. p. 51, pl. 9 (1847).
Pipilo rufipileus, *Lafr. Rev. Zool.* 1848, p. 176; *Bp. Consp.* i. p. 487 (1850).
Embernagra chlorura, *Bp. Consp.* i. p. 483 (1850); *Scl. Cat. Amer.*

B. p. 117 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 415 (1886).

Zonotrichia blandingiana, *Woodh. in Sitgr. Rep. Zuni & Color. R.* p. 85 (1853).

Kieneria rufipilea, *Bp. C. R.* xl. p. 356 (1855).

Embernaga blandingiana, *Cass. B. Calif.* p. 70, pl. 12 (1856); *Dugès, La Nat.* i. p. 140 (1868).

Pipilo chlorurus, *Baird, B. N. Amer.* p. 519 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 18, pl. 2 (1858); *Cooper, B. Calif.* p. 248 (1870); *Allen, Bull. Mus. Comp. Zool.* iii. p. 178 (1872); *Coues, Key N. Amer. B.* p. 153 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 131, pl. 31. fig. 4 (1874); *Coues, B. N.-West*, p. 176 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 307 (1875); *Sennett, Bull. U.S. Geol. Surv.* v. p. 304 (1879); *Belding, Proc. U.S. Nat. Mus.* i. p. 419 (1879); *Ridgway, op. cit.* iii. p. 181 (1881); *Coues, Check-list N. Amer. B.* p. 61 (1882); *Belding, Proc. U.S. Nat. Mus.* v. p. 540 (1883), vi. p. 348 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 398 (1884); *Drew, Auk*, ii. p. 16 (1885); *Beckh. t. c.* p. 142 (1885); *A. O. U. Check-list N. Amer. B.* p. 284 (1886); *Hensh. Auk*, iii. p. 74 (1886; *Ridgw. Man. N. Amer. B.* p. 439 (1887).

Emberizoides chlorura, *Gray, Hand-l. B.* ii. p. 91, no. 7331 (1870).

Adult male. General colour above dull olive-greenish, washed with ashy, the upper tail-coverts fringed at the tips with ashy olive; wing-coverts brighter olive-green; bastard-wing, primary-coverts, and quills dusky brown, externally olive-green, the first primary narrowly fringed with whitish along the outer web; tail-feathers olive-green, dusky on the inner webs, the outer feather narrowly fringed with whitish along the tip of the inner web; crown of head bright chestnut or bay, with a frontal patch of dusky blackish tinged with olive; an indistinct eyebrow of dull olive-green; feathers below the eye and lores dusky, minutely dotted with white; a supraloral streak of dull whitish; ear-coverts dull ashy, with narrow whitish shaft-lines; a white spot at the base of the cheeks; throat white, separated from the cheeks by a malar line of dusky blackish; remainder of cheeks, fore neck, and breast ashy grey, extending down the sides of the latter; centre of breast and abdomen dull white; sides of body and flanks as well as thighs ashy brown, inclining to isabelline on the sides of the abdomen; under tail-coverts isabelline buff; axillaries and under wing-coverts pale sulphur-yellow, the edge of the wing brighter; quills dusky below, pale ashy along the edge of the wing. Total length 6·7 inches, culmen 0·55, wing 3·1, tail 3·25, tarsus 0·9.

Adult female. Coloured like the male, but much less bright; rather more olive-brown on the upper surface of the body, the quills conspicuously margined with brown. Total length 6·7 inches, culmen 0·55, wing 3, tail 3·3, tarsus 0·85.

Hab. Interior Plateau region of the United States, from the western border of the plains to the Sierra Nevada, from about lat. 40° south into Mexico. (*A. O. U. Check-list, l. c.*)

a. ♂ ad. sk.	Rocky Mountains.	Sclater Coll.
b. ♂ ad. sk.	Fort Bridger, Utah, May 19 (*C. Drexler*; Sm. no. 11254).	U.S. National Mus. [P.].
c. ♂ ad. sk.	Fort Bridger, May 19 (*C. Drexler*; Sm. no 11253).	Salvin-Godman Coll.
d. ♀ ad. sk.	Gunnison Valley, Utah, Aug. 7 (*H. W. Henshaw*; Sm. no. 62926).	Salvin-Godman Coll.
e. ♂ ad. sk.	Upper Klamath Lake, Oregon, May 15 (*A. Forrer*).	Salvin-Godman Coll.
f. ♀ ad. sk.	S. Arizona, Sept. 11 (*H. W. Henshaw*; Sm. no. 66988).	U.S. National Mus. [P.].
g. Ad. sk.	California.	Lord Walsingham [P.].
h. ♂ ad. sk.	Sierra Nevada, Sept. (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
i. ♂ ad. sk.	Northern California, June 25, 1884 (*C. H. Townsend*; Sm. no. 99848).	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Santa Ana River, California, June 17 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
l. Ad. sk.	Mexico.	Purchased.
m. Ad. sk.	Mexico.	Sclater Coll.
n, o. Ad. sk.	Mexico.	Salvin-Godman Coll.

2. Atlapetes pileatus.

Atlapetes pileatus, *Wagler, Isis*, 1831, p. 526; *Bp. Consp.* i. p. 486 (1850); *Cab. Mus. Hein.* Th. i. p. 140, note (1850); *Scl. P. Z. S.* 1858, p. 304; *id. Cat. Amer. B.* p. 120 (1862); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 405 (1886).

Embernagra pileata, *Gray, Hand-l. B.* ii. p. 92, no. 7348 (1870).

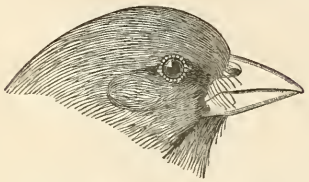
Adult. General colour above brown, faintly tinged with olive on the rump and upper tail-coverts; lesser and median coverts ashy grey, the latter slightly paler at the tips; greater coverts dark brown, externally lighter brown like the back; bastard-wing dark brown, externally ashy grey; primary-coverts and quills dark brown, edged with ashy, washed with olive near the base of the primaries; the inner secondaries externally brown like the back; tail-feathers dusky brown, edged with dark olive-brown; crown of head and nape chestnut; lores and feathers around the eye black; sides of crown dark grey, extending on to the sides of the neck; ear-coverts blackish, washed with dark ashy grey; cheeks and under surface of body yellow; the sides of the upper breast washed with ashy grey, the sides of the body and flanks dark brown; abdomen paler yellow; thighs dark ashy grey; under tail-coverts yellow, with pale olive-brown centres; under wing-coverts and axillaries ashy grey; quills below dusky, pale ashy brown along their inner edge. Total length 5·8 inches, culmen 0·55, wing 2·55, tail 2·7, tarsus 0·9.

Hab. Mexico.

a. ♂ ad. sk.	Mexico.	Salvin-Godman Coll.
b. ♂ ad. sk.	La Parada, Mexico.	A. Sallé [C.].
c. Ad. sk.	Oaxaca, Mexico (*A. Boucard*).	Sclater Coll.
d. ♂ ad. sk.	Totontepec, South Mexico, Jan. 1859 (*A. Boucard*).	Salvin-Godman Coll.

81. PIPILO.

Type.
Pipilo, *Vieillot, Analyse*, p. 32 (1816) ..... P. erythrophthalmus.



Head of *Pipilo erythrophthalmus*.

Range. The greater part of North America and Central America from Mexico to Guatemala.

Key to the Species.*

a. With the head and throat black or blackish; white or yellowish-white markings on the outer tail-feathers.
  a'. With no yellow on the under wing-coverts or axillaries.
    a''. With no white markings on the wing-coverts or scapulars.
      a'''. Larger; with larger white markings on quills and tail-feathers; iris of adult male bright carmine-red. Length 7·50–8·55, wing 3·30–3·75, tail 3·55–4·10; white space on outer tail-feathers 1·30–1·60 long *erythrophthalmus*, p. 744.
      b'''. Smaller; with smaller white markings on quills and tail-feathers; iris of adult male usually yellowish or whitish. Length 7·0–8·35, wing 2·95–3·20, tail 3·55–3·9; white space on outer tail-feathers only 0·66–0·75 long ..... *alleni*, p. 746.
    b''. With large white markings on the scapulars and wing-coverts.

* Many of the characters in this 'Key' are copied from Mr. Ridgway's 'Manual,' just published. Some of the forms differentiated by him are so meagrely represented in the Museum Collection that I have been unable to study their claims to distinction; and I have therefore followed him. As, however, most American naturalists admit that the different races of *Pipilo maculatus* merge into each other, it is questionable whether they should not all be united under a single heading.

c'''. Back more or less streaked with white (these streaks sometimes concealed or even obliterated in the middle of the back, but always distinct along the sides of the back next to the scapulars).

a^4. Streaks on back very conspicuous and other white markings greatly developed, the white on wing-coverts forming two broad continuous bars across wing, the white edges to quills and tertials always distinct, and white terminal space on the outer tail-feathers more than 1·0 inch long. *Adult females* with general colour of head, neck, chest, and upper parts greyish brown or olive-brown.

a^5. *Adult male* with rump, upper tail-coverts, remiges, and edges of tail-feathers olive-brownish (sometimes inclining to smoky greyish), the back and scapulars mixed with the same colour ..... *maculatus*, p. 747.

b^5. *Adult male* with rump, upper tail-coverts, &c. black, or but slightly intermixed with greyish; rump sometimes uniform olive-greyish.

a^6. Lighter coloured, with white markings more extensive, and rufous of sides, &c., paler, more ochraceous; white edgings to primaries sometimes developed into a more or less conspicuous patch at base; white on outer tail-feather occupying more than the exposed half (1·30–1·75 long). *Adult female* with head, neck, chest, rump, &c. broccoli-brown .. *arcticus*, p. 748.

b^6. Darker, with white markings more restricted, and rufous of sides, &c. deeper; white edgings of primaries never developed into a basal patch; white space on outer tail-feather occupying not more (usually less) than terminal exposed half (1·10-1·35 long). *Adult female* with head, neck, chest, rump, &c. dusky greyish brown ..... *megalonyx*, p. 748.

b^4. White streaks on back obsolete or concealed, except on outermost interscapulars, and other white markings much restricted; white at tips of wing-coverts reduced to small roundish spots, that on edges of quills and tertials very inconspicuous—sometimes quite obsolete; that on outer tail-feathers less than 1·0 inch in length. *Adult females* with general colour of head, neck, chest, and upper parts dark sooty brown or dusky sepia.

c^5. Larger; wing averaging more than 3·30, tail averaging more than 3·80. Length 8·0–8·6, wing 3·25–3·45, tail 3·6–4·1, exposed culmen 0·52–0·58; tarsus 1·07–1·13 ..... *oregonus*, p. 749.

d^5. Smaller; the wing averaging less than 3·1, tail averaging less than 3·6. Length about 6·5–7·5, wing 2·9–3·25, tail 3·25–3·8, tarsus 1·0–1·1..... *consobrinus*, p. 750.

d'''. Back without white streaks. *Adult males* with general colour of upper parts dusky greyish brown, the outermost scapulars with outer webs partially white, and both rows of wing-coverts tipped with small white spots; only one or two outer tail-feathers with white terminal spots, these very small (less than 0·9 inch long).

c^4. Larger; wing 3·3, tail 3·7, culmen 0·6, tarsus 1·15. *Adult male*: head, neck, and chest brownish black, becoming dark greyish brown, indistinctly streaked with darker on top of head and hind neck; back and scapulars umber-brown, tinged with rusty, broadly though rather indistinctly streaked with dusky .... *submaculatus*, p. 750.

d^4. Smaller; wing 2·6–2·8, tail 3·0–3·15, exposed culmen 0·49–0·53, tarsus 0·94–1·01. *Adult male*: head, neck, chest, and upper parts dark sooty greyish brown. *Adult female*, similar to the male, but browner ..... *carmani*, p. 751.

b'. With the axillaries and under wing-coverts olive-yellow; back olive-green, streaked with black.

c''. With spots of yellowish white on the scapulars and wing-coverts ..... *macronyx*, p. 751.

d''. With no yellowish-white markings on the scapulars..... *virescens*, p. 752.
b. With no black on the head; no white on outer tail-feathers.
c'. With a more or less distinct collar of black spots on the fore neck; breast white or ashy.
e''. General tone of throat rufescent, including the chin.
e'''. Crown of head more distinctly rufous than the back.
*e*⁴. Larger; tail 3·95 inches; lower flanks and abdomen washed with tawny, so that the rufous under tail-coverts are not in strong contrast ..... *mesoleucus*, p. 754.
*d*⁴. Smaller; tail 3·6 inches; abdomen white, flanks ashy, so that the rufous under tail-coverts are in strong contrast ..... *albigula*, p. 755.
f'''. Crown of head only slightly more rufous than the back.
*e*⁴. Throat fawn-buff, centre of breast ashy..... *crissalis*, p. 753.
*f*⁴. Throat ochreous buff, centre of breast white ..... *fuscus*, p. 752.
f'. Throat white, with a band of tawny rufous separating the chin from the lower throat ..... *rutilus*, p. 755.
d'. With no collar of black spots on the throat, which is rufescent with black streaks; centre of throat isabelline; lores and chin blackish ..... *aberti*, p. 756.

1. Pipilo erythrophthalmus.

The Towhe-bird, *Catesby, Nat. Hist. Carolina*, i. p. 34, pl. 34 (1831).
Le Pinçon de la Caroline, *Briss. Orn.* iii. p. 169 (1760).
Fringilla erythrophthalma, *Linn. Syst. Nat.* i. p. 318 (1766); *Audub. B. Amer.* pl. 29; *id. Orn. Biogr.* i. p. 150 (1831), v. p. 511 (1839); *Nutt. Man.* p. 515 (1832).
Pinçon noir aux yeux rouges, *Montb. Hist. Nat. Ois.* iv. p. 141 (1778).
Towhee Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 199 (1783); *Penn. Arctic Zool.* ii. p. 359 (1785).
Emberiza erythrophthalma, *Gm. Syst. Nat.* i. p. 874 (1788); *Wils. Amer. Orn.* iii. p. 90, pl. 53. fig. 5 (1812).
Pipilo ater, *Vieill. N. Dict. d'Hist. Nat.* xxxiv. p. 292 (1819).
Pipilo erythrophthalma, *Vieill. Gal. Ois.* i. p. 109, pl. 80 (1825); *Jard. ed. Wils. Amer. Orn.* ii. p. 293 (1832); *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Audub. Syn.* p. 124 (1839); *id. B. Amer.* 8vo, iii. p. 167, pl. 195 (1841); *Gray, Gen. B.* ii. p. 360 (1844); *Bp. Consp.* i. p. 487 (1850); *Cab. Mus. Hein.* Th. i. p. 139 (1850); *Baird, B. N. Amer.* p. 512 (1858); *Scl. Cat. Amer. B.* p. 119 (1862); *Blakist. Ibis*, 1863, p. 80; *Baird, Ibis*, 1867, p. 270; *Gray, Hand-l. B.* ii. p. 92, no. 7354 (1870); *Allen, Bull.*

Mus. Comp. Zool. iii. p. 178 (1872); *Coues, Key N. Amer. B.* p. 151 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 109, pl. 31. figs. 2, 3 (1874); *Coues, B. N.-West*, p. 173 (1874); *Maynard, B. East. N. Amer.* p. 112 (1878); *Coues, Bull. U.S. Geol. Surv.* iv. p. 598 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Coues, Check-list N. Amer. B.* p. 60 (1882); *id. Key N. Amer. B.* 2nd ed. p. 396 (1884); *Ayersb. Auk*, ii. p. 282 (1885); *Aldrich, t. c.* p. 308; *Brewst. Auk*, iii. p. 110 (1886); *Batchelder, t. c.* p. 314; *Fox, t. c.* p. 318; *Seton, t. c.* p. 324; *A. O. U. Check-list N. Amer. B.* p. 283 (1886); *Ridgw. Man. N. Amer. B.* p. 436 (1887).

Adult male. General colour above black, the upper tail-coverts obsoletely fringed with dull rufous at the ends; wing-coverts, bastard-wing, and primary-coverts black; quills black, the inner secondaries broadly edged with white along the outer web, the primaries rather broadly edged with white, which is not continuous from the base on some of the inner ones; tail-feathers black, the outer one white at the tip and along the outer web, the penultimate one with less white at the tip, reduced still further on the third feather; head all round, throat, and fore neck black; chest, breast, and abdomen white, the under tail-coverts pale fawn-colour; thighs white with black bases; sides of body and flanks rich chestnut, slightly mottled with a few dusky brown spots on the sides of the upper breast; under wing-coverts and axillaries white, with a patch of dusky brown near the outer edge of the wing; quills dusky below, ashy whitish along the edge of the inner web: "bill black; legs and claws pale yellowish brown; iris bright red" (*Audubon*). Total length 7·5 inches, culmen 0·6, wing 3·45, tail 3·85, tarsus 1·05.

Adult female. Chocolate-brown above and on the head, throat, and fore neck, in fact everywhere where the male is black; middle tail-feathers chocolate-brown; otherwise the tail as in the male, but with white at the end of four of the outer feathers; wings brown where they are black in the male, the primaries white at the base of the outer web, forming a speculum, the outer ones with a small white mark towards the end of the outer web, not connected along the margin of the feathers with the white basal mark; the inner secondaries with a broad white mark along the outer web, fringed with sandy rufous; rest of the under surface of body as in the male, excepting that the chestnut on the sides of the body is paler. Total length 7·5 inches, culmen 0·65, wing 3·35, tail 3·7, tarsus 1·15.

In the adult the iris is bright red, but in the young it is frequently brown and sometimes yellowish white. In some instances one eye is brown and the other red. (*Audubon.*)

The winter plumage of the adults does not appear to differ much from that of summer, but the long white marks on the outer webs of the inner secondaries are tinged with rufous. The white on the outer tail-feathers is of various extent in individuals, and a white spot is seen in some examples at the tip of the fourth feather.

Hab. Eastern United States and Southern Canada west to the plains.

a. ♂ ad. sk.	49th Parallel, May 15, 1874 (*G. Dawson*).	N. A. Boundary Com.
b. ♂ ad. sk.	Fort Dufferin (*G. D.*).	N. A. Boundary Com.
c. ♂ ad. sk.	Mount Healthy, Hamilton Co., Ohio, Jan. (*J. H. Fisher*).	R. B. Sharpe, Esq. [P.].
d. ♂ ad. sk.	Hyde Park, Illinois, May 10, 1875 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Hyde Park, June 5, 1884 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
f, *g*. ♂ ♀ ad. sk.	Mount Carmel, Illinois, April (*R. Ridgway*).	U.S. Nat. Museum [P.].
h. ♂ ad. sk.	Grand Crossing, Illinois, March 27, 1884 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
i. ♀ ad. sk.	Whiting Station, Indiana, April 27 (*H. K. C.*).	U.S. Nat. Museum [P.].
k. ♀ ad. sk.	Whiting Station, April 27 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
l. ♂ juv. sk.	Lake Co., Indiana, July 4, 1878 (*H. K. C.*).	R. B. Sharpe, Esq. [P.].
m. ♂ ad. sk.	Maryland, May 1, 1860 (*E. Coues*; Sm. no. 29101).	Salvin-Godman Coll.
n. ♀ ad. sk.	Washington, D.C. (*C. Drexler*; Sm. no. 29152).	Salvin-Godman Coll.
o. ♂ juv. sk.	District of Columbia, July 27, 1859 (*E. Coues*; Sm. no. 83677).	Salvin-Godman Coll.
p, *q*. ♂ ♀ ad. sk.	South Carolina, April 1884 (*W. Brewster*).	R. B. Sharpe, Esq. [P.].
r. ♂ ad. sk.	N. Carolina, Nov. 1856 (*P. L. S.*).	Sclater Coll.

Subsp. *a*. **Pipilo alleni.**

Pipilo alleni, *Coues*, *Amer. Nat.* v. p. 366 (1871).
Pipilo erythrophthalmus, var. alleni, *Coues*, *Key N. Amer. B.* p. 152 (1872); *Baird*, *Brewer*, *& Ridgw. Hist. N. Amer. B.* ii. p. 112 (1874); *Coues*, *B. N.-West*, p. 173 (1874).
Pipilo erythrophthalmus, alleni, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 217 (1881); *Coues*, *Check-list N. Amer. B.* p. 60 (1882); *id. Key N. Amer. B.* 2nd ed. p. 396 (1884); *A. O. U. Check-list N. Amer. B.* p. 283 (1886); *Ridgw. Man. N. Amer. B.* p. 436 (1887).

Adult male. Similar to *P. erythrophthalmus*, but smaller, and having a yellowish or whitish eye; the white marks on the wings and tail-feathers smaller. Total length 7·6 inches, culmen 0·6, wing 3·15, tail 3·6, tarsus 1.

Adult female. Similar to that of *P. erythrophthalmus*. Total length 6·7 inches, culmen 0·65, wing 3, tail 3·25, tarsus 1·05.

Hab. Florida.

a, *b*. ♂ ♀ ad. sk.	Clearwater, Florida (*Col. S. T. Walker*; Sm. no. 77354–77359).	Salvin-Godman Coll.

2. Pipilo maculatus.

Pipilo maculatus, *Swains. Phil. Mag.* new series, i. p. 434 (1827); *Jard. & Selby, Ill. Orn.* i. pls. 31, 32 (c. 1839); *Gray, Gen. B.* ii. p. 360 (1844); *Bp. Consp.* i. p. 487 (1850); *Scl. P. Z. S.* 1858, p. 304, 1859, p. 380; *Sumichr. Mem. Bost. Soc.* i. p. 552 (1869); *Scl. & Salv. P. Z. S.* 1869, p. 361; *Gray, Hand-l. B.* ii. p. 92, no. 7357 (1870); *Coues, Key N. Amer. B.* p. 152 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 22 (1876); *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 408 (1886); *Ridgw. Auk,* iii. p. 332 (1886); *id. Man. N. Amer. B.* p. 436 (1887).

Pipilo oregonus (*nec Audub.*), *Salvin, Ibis,* 1866, p. 193; *Dugès, La Natur.* i. p. 140 (1868).

Pipilo maculatus, *a.* maculatus, *Coues, B. N.-West,* p. 175 (1874).

Adult. General colour above black, the lower back and rump rather browner, the upper back and scapulars strongly mottled with longitudinal streaks of white on the outer webs of the feathers; lesser wing-coverts black, tipped with small spots of white; median and greater coverts black, with large white spots at the end of the outer webs, forming a double wing-bar; bastard-wing black, with a narrow white mark at the end of the outer web; primary-coverts and quills black, the primaries with a faint white edging near the base, more distinct about the middle of the outer web, the inner secondaries with a broad longitudinal white mark along the outer web; upper tail-coverts brownish black, fringed with rusty white at the ends; tail-feathers black, the four outer ones marked at the end with a white spot, at first confined to the inner web, but gradually extending in size towards the outermost, which is also edged with white along the outer web; crown of head, sides of face, and entire throat, sides of neck, and fore neck black, some of the feathers of the throat mottled with white bases; breast and abdomen white, with a slight tinge of tawny on the latter; sides of body and flanks bright tawny rufous; thighs black, edged with ashy whitish; under tail-coverts lighter tawny rufous; under wing-coverts and axillaries white with dusky bases, the latter slightly washed with fulvous; quills below blackish, ashy along the inner edge. Total length 7·7 inches, culmen 0·6, wing 3·6, tail 3·8, tarsus 1·15.

Another specimen in the Salvin-Godman Collection, from Quezaltenango, is slightly washed with olive-greenish on the back, as is also a specimen from Oaxaca in the same collection.

Hab. Central America, from Mexico to Guatemala.

a. Ad. sk.	[Mexico].	
b. Ad. sk.	Mexico (*Elwes*).	Sclater Coll.
c. Ad. sk.	Real del Monte (*de Saussure*).	Sclater Coll.
d. ♂ ad. sk.	Oaxaca (*Fenochio*).	Salvin-Godman Coll.
e, f. Ad. sk.	Quezaltenango, Guatemala (*O. Salvin*).	Salvin-Godman Coll.

Subsp. *a*. Pipilo arcticus.

Pyrgita (Pipilo) arctica, *Swains. & Rich. Faun. Bor.-Amer., Birds*, p. 26, pls. 51, 52 (1831).

Pipilo arcticus, *Bp. Comp. List B. Eur. & N. Amer.* p. 35 (1838); *Audub. Syn.* p. 123 (1839); *Gray, Gen. B.* ii. p. 360 (1844); *Bp. Consp.* i. p. 487 (1850); *Baird, B. N. Amer.* p. 514 (1858); *Scl. Cat. Amer. B.* p. 119 (1862); *Dresser, Ibis*, 1865, p. 492; *Gray, Hand-l. B.* ii. p. 92, no. 7359 (1870).

Pipilo subarcticus, *Baird, B. N. Amer.* p. 515 (1858).

Pipilo erythrophthalmus, var. arcticus, *Allen, Bull. Mus. Comp. Zool.* iii. p. 178 (1872).

Pipilo maculatus, var. arcticus, *Coues, Key N. Amer. B.* p. 152 (1872); *id. B. N.-West*, p. 175 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 119, pl. 31. figs. 5, 6 (1874).

Pipilo maculatus arcticus, *Coues, Bull. U.S. Geol. Surv.* iv. p. 599 (1878); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Coues, Check-list N. Amer. B.* p. 16 (1882); *id. Key N. Amer. B.* 2nd ed. p. 396 (1884); *Beckh. Auk*, ii. p. 142 (1885); *Agersb. t. c.* p. 282; *Seton, Auk*, iii p. 324 (1886); *A. O. U. Check-list N. Amer. B.* p. 283 (1886); *Ridgw. Man. N. Amer. B.* 437 (1887).

Adult male. Scarcely differs from *P. maculatus*. The contrast of the grey of the lower back and rump with the black of the upper parts not quite so pronounced. Total length 7·6 inches, culmen 0·55, wing 3·4, tail 3·65, tarsus 1·1.

Hab. Plains of the Platte, Upper Missouri, Yellowstone, and Saskatchewan Rivers west to the eastern slope of the Rocky Mountains; south in winter to Kansas, Colorado and Texas (*A. O. U. Check-list, l. c.*).

a. ♂ ad. sk.	[Texas.]	R. B. Sharpe, Esq. [P.].
b. Ad. sk.	Texas, Nov. 10, 1863 (*H. E. Dresser*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Texas, Nov. 10, 1863 (*H. E. Dresser*).	Sclater Coll.
d. ♀ ad. sk.	Kendall Co., Texas, Jan. 19, 1880 (*N. C. Brown*).	R. B. Sharpe, Esq. [P.].
e. ♂ ad. sk.	Yellowstone River, Sept. 24 (*G. H. Nook*; Sm. no. 29458).	Salvin-Godman Coll.
f. ♀ ad. sk.	Nebraska (*Dr. Hayden*); Sm. no. 4844).	Sclater Coll.

Subsp. *β*. Pipilo megalonyx.

Pipilo megalonyx, *Baird, B. N. Amer.* p. 515, pl. 73 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 17 (1858); *Scl. Cat. Amer. B.* p. 119 (1862); *Gray, Hand-l. B.* ii. p. 92, no. 7356 (1870); *Cooper, B. Calif.* p. 242 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 409 (1886).

Pipilo maculatus, var. megalonyx, *Coues, Key N. Amer. B.* p. 152 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 113, pl. 31. fig. 9 (1874); *Coues, B. N.-West*, p. 174 (1874); *Belding, Proc. U.S. Nat. Mus.* i. p. 419 (1879).

Pipilo maculatus megalonyx, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Belding, op. cit.* v. p. 549 (1883), vi. pp. 343, 344 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 397 (1884); *Batchelder, Auk*, ii. p. 128 (1885); *Scott, t. c.* p. 355; *Hensh. Auk*, iii. p. 74 (1886); *Everm. t. c.* p. 182; *A. O. U. Check-l. N. Amer. B.* p. 284 (1886); *Ridgw. Man. N. Amer. B.* p. 437 (1887).

Pipilo maculatus arcticus megalonyx, *Drew, Auk*, ii. p. 16 (1885).

Hardly to be distinguished from *P. arcticus* (see Mr. Ridgway's characters as quoted in the "Key," *antea*, p. 742). Total length 8 inches, culmen 0·55, wing 3·6, tail 4, tarsus 1·05.

Young. Brown where the adult is black, the white markings indicated by rusty brown or reddish white; under surface of body ochreous buff, streaked with black, the centre of the abdomen and lower breast fulvescent, the flanks and under tail-coverts more rufous.

Hab. Rocky-Mountain region of the United States, west to the Sierra Nevada and Southern California (*A. O. U. Check-list, l. c.*).

a. Ad. sk.	California (*Grueber*).	Sclater Coll.
b. Ad. sk.	California (*Schott*).	Sclater Coll.
c. Ad. sk.	California.	Lord Walsingham [P.].
d. Ad. sk.	California.	Sclater Coll.
e. Juv. sk.	California (*L. Belding*; Sm. no. 76590).	U.S. Nat. Mus. [P.].
f. ♂ ad. sk.	El Paso, California (*C. E. Aiken*).	R. B. Sharpe, Esq. [P.].
g. ♂ ad. sk.	San Gordonio, California, May 20, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
h. Ad. sk.	California.	Sclater Coll.
i. Juv. sk.	Tejon Mountains, Aug. 1875 (*H. W. Henshaw*; Sm. no. 71340).	U.S. Nat. Mus. [P.].
k. ♂ ad. sk.	Fort Tejon, California, Aug. 30, 1857 (*J. Xantus*; Sm. no. 26086).	Salvin-Godman Coll.
l. ♂ ad. sk.	Carson, Nevada, May 21, 1877 (*H. W. Henshaw*; Sm. no. 77663).	U.S. Nat. Museum [P.].
m. ♂ ad. sk.	Apache Agency, Arizona, July 14, 1874 (*H. W. Henshaw*; Sm. no. 69671).	Salvin-Godman Coll.
n. ♂ ad. sk.	Apache, Arizona, Nov. 4, 1873 (*Dr. Newberry*; Sm. no. 66984).	U. S. Nat. Mus. [P.].

Subsp. γ. Pipilo oregonus.

Fringilla arctica (*nec Sw.*), *Audub. B. Amer.* pl. 394; *id. Orn. Biogr.* v. p. 49 (1839).

Pipilo oregonus, *Bell, Ann. Lyc. N. Y.* v. p. 6 (1852); *Audub. Syn.* p. 123; *id. B. Amer.* iii. p. 164, pl. 194 (1841); *Baird, B. N. Amer.* p. 513 (1858); *Scl. Cat. Amer. B.* p. 119 (1862); *Gray, Hand-l. B.* ii. p. 92, no. 7355 (1879); *Cooper, B. Calif.* p. 242 (1870).

Pipilo maculatus, var. oregonus, *Coues, Key N. Amer. B.* p. 152 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. 116, pl. 31. fig. 12 (1874); *Coues, B. N.-West*, p. 175 (1871).

Pipilo maculatus oregonus, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Coues, Check-l. N. Amer. B.* p. 60 (1882); *id. Key N. Amer. B.* 2nd ed. p. 396 (1884); *Anthony, Auk*, iii. p. 169 (1886); *A. O. U. Check-list N.-Amer. B.* p. 284 (1886); *Ridgw. Man. N. Amer. B.* p. 437 (1887).

Adult male. General colour above black, the lower back and rump included; the scapulars black, with longitudinal white marks near the end of the outer web; lesser wing-coverts black; median and greater coverts black, with a white spot at the end; bastard-wing, primary-coverts, and quills black, with a small white edging to some of the primaries, and a slight indication of a white spot at the end of the secondaries; upper tail-coverts black; tail-feathers black, the three outer ones with a spot of white at the end of the inner web, increasing in size towards the outermost; crown of head, sides of face, ear-coverts, cheeks, and throat black, as also the sides of the neck; fore neck, breast, and abdomen white; sides of body and flanks deep orange-chestnut; thighs black; under tail-coverts orange-chestnut; under wing-coverts and axillaries white washed with rufous, and having black bases; quills below blackish, ashy along the inner edge. Total length 6·9 inches, culmen 0·6, wing 3·35, tail 3·5, tarsus 1·05.

The mantle in this species is generally entirely black, but in the specimen described some of the feathers adjacent to the scapulars are also marked with white.

Hab. Pacific coast-region from Washington Territory, south to San Francisco, California (*A. O. U. Check-l. l. c.*).

a. ♂ ad. sk.	N.W. Boundary Survey (*Dr. C. B. Kennerley*; Sm. no. 15986).	Salvin-Godman Coll.
b. [♀] ad. sk.	Straits of San Juan de Fuca.	Capt. Kellett & Lieut. Wood [P.].
c. ♂ ad. sk.	Vancouver Island.	J. K. Lord, Esq. [P.].
d. ♂ ad. sk.	Vancouver Island.	Dr. Lyall [P.].
e, f, g. Ad. sk.	British Columbia.	J. K. Lord, Esq. [C.]
h, i. ♂ ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].

Subsp. δ. Pipilo consobrinus.

Pipilo maculatus consobrinus, *Ridgw. Bull. U.S. Geol. Surv.* ii. p. 189 (1878); *id. Proc. U.S. Nat. Mus.* iii. pp. 181, 217, 228 (1881).
Pipilo consobrinus, *Ridgw. Bull. Nutt. Orn. Club*, ii. p. 60 (1877); *A. O. U. Check-list N. Amer. B.* p. 284 (1886); *Ridgw. Man.* p. 437 (1887).

Similar to *P. oregonus*, but smaller, &c. (*cf.* Mr. Ridgway's characters in the "Key" p. 742).

Hab. Guadelupe Island, Lower California.

Subsp. ε. Pipilo submaculatus.

Pipilo submaculatus, *Ridgw. Auk*, iii. p. 332 (1886); *id. Man.* p. 438 (1887).

For Mr. Ridgway's definition of this race, see the "Key" (*antea*, p. 743).

Hab. Southern Mexico.

Subsp. ζ. **Pipilo carmani.**

Pipilo carmani, *Lawr. Ann. Lyc. N. Y.* x. p. 7 (1871); *Grayson, Proc. Bost. Soc. N. H.* xiv. p. 299 (1871); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 407 (1886); *Ridgw. Man. N. Amer. B.* p. 438 (1887).

Pipilo erythrophthalmus, var. carmani, *Lawr. Mem. Bost. Soc. N. H.* ii. p. 227 (1874).

Pipilo maculatus, var. carmani, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 109 (1874).

Pipilo maculatus carmani, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 181, 217, 228 (1881).

The characters for this race will be found in the "Key" (*antea*, p. 743), where they are taken from Mr. Ridgway's 'Manual.'

Hab. Socorro Island, Western Mexico.

3. Pipilo macronyx *.

Pipilo macronyx (part.), *Swains. Phil. Mag.* n. ser. i. p. 434 (1827); *Gray, Gen. B.* ii. p. 360 (1844); *Bp. Consp.* i. p. 487 (1850); *Scl. & Salv. P. Z. S.* 1869, p. 36; *Gray, Hand-l. B.* ii. p. 92, no. 7360 (1870); *Salvin, Cat. Strickl. Coll.* p. 234 (1882); *id. & Godman, Biol. Centr.-Amer., Aves*, i. p. 406 (1886); *Ridgw. Man. N. Amer. B.* p. 438 (1887).

Pipilo complexus, *Ridgw. Auk*, iii. p. 332 (1886); *id. Man. N. Amer. B.* p. 439 (1887).

Adult (type of *P. macronyx*). General colour above dusky olive-green, uniform on the lower back, rump, and upper tail-coverts, which have somewhat of an ashy shade; the upper back and mantle streaked with black centres to the feathers, which have also a broad lateral streak of yellowish white towards the end of the outer web; lesser wing-coverts blackish, washed with olive-yellow, and with round mesial spots of yellowish white; median and greater coverts black, washed with olive-yellow and tipped with yellowish white; bastard-wing and primary-coverts blackish, fringed with olive-yellow; quills dusky brown, externally olive-yellow, the inner secondaries with a longitudinal mark of yellowish white near the end of the outer web, thus resembling the greater coverts; tail-feathers dusky brown, externally washed with olive-yellow, the three outer ones with a white mark on the inner web, increasing in extent towards the outermost, which is yellowish white along the outer web also; crown of head, nape, and hind neck black, with a

* Swainson appears to have confounded two perfectly distinct species under the heading of *Pipilo maeronyx*. I differ from Messrs. Salvin and Godman in considering that the specimens with yellow streaks on the back are of the same species as the plain green-backed ones; and as Swainson evidently included both forms under his *P. macronyx*, I have attached his name to the yellow-streaked form, and have restricted Hartlaub's name of *P. virescens* to the plain-backed bird. It is quite probable that the two species will be found to merge one into the other, but I have seen no evidence of it at present.

few rusty olive margins to the feathers of the latter parts; lores, sides of face, ear-coverts, cheeks, and throat black; remainder of under surface of body white; the sides of body and flanks tawny buff, browner on the lower flanks; thighs ashy grey; under tail-coverts tawny buff; under wing-coverts and axillaries olive-yellow, the former with dusky centres; quills below dusky, ashy along the edge of the inner web. Total length 8·5 inches, culmen 0·5, wing 3·95, tail 4·5, tarsus 1·25. (*Mus. Cantabr.*)

Young. More rusty brown in tint than the adults, especially on the hinder crown and nape; the whitish spots on the scapulars not so fully developed as in the adults, and also tinged with rusty; the black feathers of the head and throat with obscure rusty brown edges, the throat also somewhat mottled with ashy-whitish bases to the feathers.

Hab. Mexico.

a, b. Ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.
c. Juv. sk.	Mexico (*Elwes*).	Sclater Coll.

4. Pipilo virescens.

Pipilo virescens, *Hartl. J. f. O.* 1863, p. 228; *Gray, Hand-l. B.* ii. p. 92, no. 7361 (1870).

Pipilo chlorosoma, *Baird, in Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 105 (1874); *Ridgw. Man. N. Amer. B.* p. 439 (1887).

Pipilo complexus, *Ridgw. Auk*, iii. p. 332 (1886); *id. Man. N. Amer. B.* p. 439 (1887).

Adult. Similar to *P. macronyx*, but differs in wanting the conspicuous pale yellow spots on the scapulars and wing-coverts, the latter being merely edged with pale olive-yellow near the ends: the back is plain olive-green, with terminal spots or streaks of dusky black; the lower throat is mottled with white bases to the feathers, although this character is also seen in *P. macroynx* to a less extent. Total length 8·4 inches, culmen 0·7, wing 3·65, tail 4·05, tarsus 1·2.

Hab. Mexico.

a. Ad. sk.	S. Mexico (*A. Boucard*).	Salvin-Godman Coll.
b. Ad. sk.	S. Mexico (*A. Boucard*).	Sclater Coll.
c. Ad. sk.	Mexico (*e dono Hartlaub*).	Sclater Coll.
d. Ad. st.	Mexico.	Zoological Society.

5. Pipilo fuscus.

Pipilo fuscus, *Swains. Phil. Mag.* n. s. i. p. 434 (1827); *Gray, Gen. B.* ii. p. 360 (1844); *Bp. Consp.* i. p. 487 (1850); *Scl. P. Z. S.* 1856, p. 304, 1857, p. 127; *Baird, B. N. Amer.* p. 517 (1858); *Scl. Cat. N. Amer. B.* p. 119 (1862); *Dugès, La Nat.* i. p. 140 (1868); *Scl. & Salv. P. Z. S.* 1869, p. 361; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Gray, Hand-l. B.* ii. p. 93, no. 7364 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 12 (1874); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 409 (1886).

Kieneria fusca, *Bp. C. R.* xl. p. 356 (1885).

Adult male. General colour above brown, the upper tail-coverts fringed with ashy whitish; wings like the back, the primaries edged with paler and more ashy brown; tail-feathers dark brown; crown of head pale rufous chocolate, slightly contrasting with the back; lores and feathers round the eye whitish; ear-coverts dull ashy brown, narrowly streaked with white shaft-lines; cheeks and throat pale ochreous buff, with a necklace of black spots extending from the malar line across the lower throat; fore neck and breast ashy brown, whiter on the centre of the breast and inclining to pale tawny buff on the abdomen; sides of body ashy brown tinged with tawny on the lower flanks and thighs; vent and under tail-coverts conspicuously tawny buff; under wing-coverts whitish, washed with very pale tawny buff, with dusky bases; axillaries ashy brown, fringed with whitish; quills dusky below, ashy along the edge of the inner web. Total length 7·8 inches, culmen 0·6, wing 3·85, tail 3·65, tarsus 1·1.

Hab. Mexico.

a. Ad. sk.	Mexico.	J. Gould, Esq.
b. Ad. sk.	Mexico (*De Saussure*).	Sclater Coll.
c. ♀ ad. sk.	Puebla, Mexico.	A. Boucard [C.].
d. Ad. sk.	Puebla, Mexico, March (*A. Boucard*).	Sclater Coll.
e. Ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.
f. Ad. sk.	N. Mexico.	Sclater Coll.

Subsp. *a*. Pipilo crissalis.

Fringilla crissalis, *Vigors, in Beechey's Voy. 'Blossom,'* p. 19 (1839).
Pipilo fuscus (*nec Sw.*), *Cass. Ill. B. Calif.* p. 124, pl. 17 (1856); *Evcrm. Auk*, iii. p. 182 (1886).
Pipilo crissalis, *Gray, Hand-l. B.* ii. p. 93, no. 7635 (1870).
Pipilo fuscus, var. crissalis, *Coues, Key N. Amer. B.* p. 153 (1872); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 277 (1874); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 122, pl. 31. fig. 8 (1874); *Belding, Proc. U.S. Nat. Mus.* i. p. 420 (1879); *Cooper, op. cit.* p. 249 (1880); *Belding, op. cit.* v. p. 528 (1883).
Pipilo fuscus crissalis, *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Coues, Check-l. N. Amer. B.* p. 61 (1882); *id. Key N. Amer. B.* 2nd ed. p. 397 (1884); *A. O. U. Check-l. N. Amer. B.* p. 285 (1886); *Ridgw. Man. N. Amer. B.* p. 441 (1887).

Adult male. Similar to *P. fuscus*, but larger; the feathers round the eye and lores pale tawny buff, the former minutely dotted with white; cheeks and throat deep tawny buff, with the same necklace of black spots as in *P. fuscus*; fore neck and breast entirely pale ashy, inclining to isabelline on the abdomen; under wing-coverts and axillaries very pale tawny buff, with dusky bases. Total length 8·5 inches, culmen 0·65, wing 3·58, tail 4·15, tarsus 1·1.

Adult female. Similar to the male, but a little paler rufous on the throat and under tail-coverts. Total length 8 inches, wing 3·7, tail 4·1, tarsus 1·1.

Young. Recalls the colours of the adult, but is everywhere paler and more dingy, the lower parts being mottled with spots of ashy brown on the throat, breast, and sides of body.

Hab. California.

a. Ad. sk.	California (*Dr. Cooper*).	Sclater Coll.
b. Ad. sk.	California.	Purchased.
c. ♂ ad. sk.	California (*Bell*).	Sclater Coll.
d. ♂ ad. sk.	Northern California, June 22 (*C. H. Townsend*; Sm. no. 91941).	U.S. Nat. Mus. [P.].
e. Ad. sk.	Redwood, California, April 1877 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
f. Ad. sk.	Nevada, California, Oct. 1872 (*E. W. Nelson*).	R. B. Sharpe, Esq. [P.].
g. ♀ ad. sk.	Fort Tejon, California, Dec. 3, 1857 (*J. Xantus*; Sm. no. 26128).	U.S. Nat. Mus. [P.].
h. ♂ ad. sk.	Fort Tejon, California, Dec. 26, 1857 (*J. Xantus*; Sm. no. 26132).	Salvin-Godman Coll.
i. ♀ ad. sk.	Greenwood Valley, Eldorado City, California, Dec. 19 (*A. Forrer*).	Salvin-Godman Coll.
k. Juv. sk.	Nicasio, California, July 26, 1883.	R. B. Sharpe, Esq. [P.].
l. Ad. sk.	Monterey.	Zoological Society. (Type of species.)

Subsp. β. **Pipilo mesoleucus.**

Pipilo mesoleucus, *Baird, Proc. Philad. Acad.* 1854, p. 119; *Scl. P. Z. S.* 1856, p. 304; *Baird, B. N. Amer.* p. 518, pl. 29 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 18 (1858); *Scl. Cat. Amer. B.* p. 120 (1862).

Pipilo fuscus, pt., *Gray, Hand-l. B.* ii. p. 93, no. 7364 (1870).

Pipilo fuscus (*nec Sw.*), *Coues, Key N. Amer. B.* p. 152 (1872).

Pipilo fusca, var. mesoleuca, *Ridgw. Bull. Essex Inst.* v. p. 183 (1873).

Pipilo fuscus, var. mesoleucus, *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 125, pl. 31. fig. 10 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 304 (1875).

Pipilo fuscus mesoleucus, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 4, 181 (1881); *Coues, Check-l. N. Amer. B.* p. 61 (1882); *Belding, Proc. U.S. Nat. Mus.* vi. p. 343 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 397 (1884); *Drew, Auk*, ii. p. 16 (1885); *Stephens, t. c.* p. 228; *Hensh. Auk*, iii. p. 74 (1886); *A. O. U. Check-l. N. Amer. B.* p. 285 (1886); *Ridgw. Man. N. Amer. B.* p. 440 (1887).

Adult male. Pale ashy brown above, the upper tail-coverts washed with pale sandy rufous; wing-coverts light brown, externally margined with ashy, and fringed with dull white at the ends; bastard-wing, primary-coverts, and quills dusky brown, narrowly edged with ashy; tail-feathers dark brown, barred across with dusky under certain lights, the outer ones slightly tipped with pale sandy rufous; head a little more rufescent than the back, the lores and feathers below the eye dull white; ear-coverts pale sandy brown;

cheeks and throat dull white, spotted with black, more largely on the fore neck; centre of breast whitish, the sides ashy; sides of the body and thighs pale ashy, washed with fulvous; under tail-coverts pale tawny buff; axillaries and under wing-coverts dull whitish, with dusky bases; quills dusky below, edged with dull white along the inner web. Total length 8 inches, culmen 0·65, wing 3·65, tail 3·95, tarsus 1·05.

Hab. Southern border of the United States, from the Valley of the Upper Rio Grande, west to the Valley of the Gila, south into Western Mexico (*A. O. U. Check-list, l. c.*).

a. ♂ ad. sk.	Santa Rita Mountains, Arizona, June 29, 1884 (*E. W. Nelson*; Sm. no. 98953).	U.S. Nat. Mus. [P.].
b. ♂ ad. sk.	Arizona, Aug. 7, 1874 (*Dr. Rothrock*; Sm. no. 69688).	U.S. Nat. Mus. [P.].
c. Ad. sk.	New Mexico (*Kennicott*).	Sclater Coll.
d. Ad. sk.	[California.]	Purchased.

6. Pipilo albigula.

Pipilo albigula, *Baird, Proc. Philad. Acad.* 1859, p. 305 (1858); *Cooper, B. Calif.* p. 248 (1870); *Gray, Hand-l. B.* ii. p. 92, no. 7362 (1874).

Pipilo fuscus, var. albigula, *Coues, Key N. Amer. B.* p. 152 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 127, pl. 31. fig. 11 (1874).

Pipilo fuscus albigula, *Ridgw. Proc. U.S. Nat. Mus.* iii. pp. 181, 218, 228 (1881); *Coues, Check-l. N. Amer. B.* p. 61 (1882); *Belding, Proc. U.S. Nat. Mus.* v. p. 540 (1883); *Coues, Key N. Amer. B.* 2nd ed. p. 397 (1884); *A. O. U. Check-list N. Amer. B.* p. 285 (1886); *Ridgw. Man. N. Amer. B.* p. 440 (1887).

Adult male. Similar to *P. mesoleucus*, but smaller, with the abdomen white and the flanks ashy brown, causing the tawny rufous under tail-coverts to appear in strong contrast. Total length 7·3 inches, culmen 0·7, wing 3·55, tail 3·6, tarsus 0·9.

Adult female. Similar in plumage to the male. Total length 7 inches, culmen 0·65, wing 3·6, tail 3·75, tarsus 0·95.

Hab. Lower California.

a. Ad. sk.	Lower California (*J. Xantus*).	Sclater Coll.
b. ♂ ad. sk.	Cape S. Lucas, Lower California (*J. Xantus*; Sm. no. 26500).	Salvin-Godman Coll.
c. ♂ ad. sk.	La Paz, Lower California, Dec. 5 (*A. Forrer*).	Salvin-Godman Coll
d. ♀ ad. sk.	La Paz, Lower California, March 28 (*A. Forrer*).	Salvin-Godman Coll.

7. Pipilo rutilus.

Tanagra rutila, *Licht. Preis Verz. Mex., Vög.* p. 2 (1830); *Cab. J. f. O.* 1863, p. 57.

Pipilo albicollis, *Sclater, P. Z. S.* 1858, p. 304, 1859, p. 380; *id.*

Cat. Amer. B. p. 120 (1862); *Gray, Hand-l. B.* ii. p. 92, no. 7358 (1870); *Lawr. Bull. U.S. Nat. Mus.* no. iv. p. 22 (1878).
Pipilo rutilus, *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 410 (1886).

Adult male. General colour above brown with a slight olive tinge; lesser wing-coverts like the back; median and greater coverts brown, externally like the back, with narrow whitish ends, forming an indistinct double wing-bar; bastard-wing brown, fringed with whitish: primary-coverts and quills brown, edged with the same colour as the back, paler and more ashy on the primaries; upper tail-coverts like the back; tail-feathers brown, rather more olive-brown on the margins; crown of head like the back; lores and feathers round the eye white; feathers below the eye and ear-coverts brown with faintly indicated shaft-lines; cheeks brown, whitish anteriorly; throat white, with a band of tawny rufous across the centre reaching on to the hinder cheeks; a malar line of blackish-brown spots, joined to a crescentic line of blackish-tipped feathers on the fore neck and chest; chest white, mottled with ashy brown ends to the feathers, the sides of the breast ashy brown; lower breast and abdomen white, more tawny on the lower abdomen; sides of body ashy brown, slightly tinged with olive, the flanks washed with tawny buff; thighs ashy brown, whitish on their inner aspect; under tail-coverts bright tawny rufous; under wing-coverts and axillaries white, with dusky brown bases; quills below dusky, ashy whitish along the inner edge. Total length 7·8 inches, culmen 0·65, wing 3·35, tail 3·65, tarsus 1.

Hab. Mexico.

a. ♂ ad. sk.	Oaxaca, Mexico, March 1854 (*A. Sallé*).	Salvin-Godman Coll.
b. Ad. sk.	Oaxaca (*A. Boucard*).	Sclater Coll. (Type of *P. albicollis*.)
c. ♂ ad. sk.	Mexico.	A. Sallé [C.].

8. Pipilo aberti.

Pipilo aberti, *Baird in Stansbury's Rep. Exped. Gt. Salt Lake*, p. 325 (1852); *id. B. N. Amer.* p. 516 (1858); *id. Mex. Bound. Surv., Birds*, p. 18 (1858); *Scl. Cat. Amer. B.* p. 119 (1862); *Cooper, B. Calif.* p. 244 (1870); *Gray, Hand-l. B.* ii. p. 93, no. 7366 (1870); *Coues, Key N. Amer. B.* p. 153 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 128, pl. 31. fig. 7 (1874); *Hensh. Rep. Zool. Expl. 100th Merid.* p. 306 (1875); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Coues, Check-l. N. Amer. B.* p. 61 (1882); *id. Key N. Amer. B.* 2nd ed. p. 398 (1884); *Drew, Auk*, ii. p. 16 (1885); *A. O. U. Check-l. N. Amer. B.* p. 285 (1886); *Ridgw. Man. N. Amer. B.* p. 441 (1887).
Kieneria aberti, *Bp. C. R.* xl. p. 356 (1855).

Adult male. General colour pale isabelline brown, deeper and more rufescent on the upper tail-coverts; lesser wing-coverts like the back; the median and greater series and the bastard-wing light

brown, with pale sandy margins; primary-coverts and quills light brown, edged with ashy, the secondaries rather more broadly with pale sandy brown; tail-feathers dark brown, barred with dusky under certain lights, the tips inclining to pale sandy buff, with which the outer feather is faintly edged; head pale like the back; ear-coverts, cheeks, and throat pale isabelline, with a few dusky spots along the malar line; fore neck, breast, and sides of body pale vinous isabelline, much paler on the centre of the breast and abdomen, the vent and under tail-coverts inclining to tawny buff; axillaries and under wing-coverts vinous isabelline; quills dusky below, pale ashy along the inner webs. Total length 8·5 inches, culmen 0·7, wing 3·6, tail 4·4, tarsus 1·1.

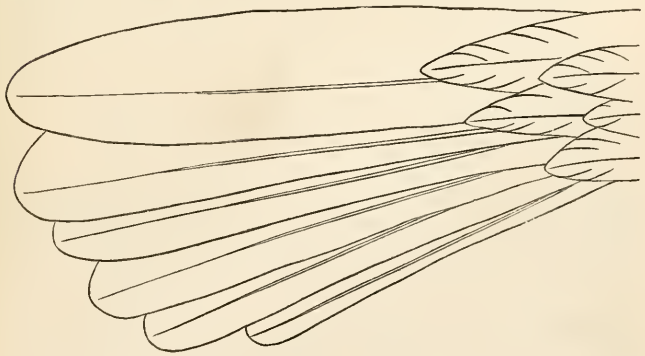
Adult female. Similar in colour to the male. Total length 8 inches, culmen 0·6, wing 3·4, tail 3·9, tarsus 1·05.

Hab. New Mexico and Arizona, north into Southern Colorado and Utah (*A. O. U. Check-l. l. c.*).

a. ♂ ad. sk.	Fort Yuma, Sept. 17 (*E. Coues*; Sm. no. 40888).	U.S. Nat. Mus. [P.].
b. ♂ ad. sk.	Fort Yuma, July 5, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
c. ♀ ad. sk.	Fort Yuma, March 5, 1886 (*F. Stephens*).	G. Frean Morcom, Esq. [P.].
d. Ad. sk.	Colorado River (*A. Schott*; Sm. no. 4578).	Salvin-Godman Coll.
e. Ad. sk.	New Mexico (*Kennicott*; Sm. no. 6721).	Sclater Coll.

82. EMBERNAGRA.

	Type.
Embernagra, *Less. Traité*, p. 465 (1831)	E. platensis.
Limnospiza, *Cab. Mus. Hein.* Th. i. p. 136 (1850)	E. platensis.



Tail of *Embernagra platensis*.

Range. From Texas throughout Central America to Venezuela, Colombia, Ecuador, and Peru; Southern Brazil, Argentine Republic Chili, and Bolivia.

Key to the Species.

a. Larger; wing 3·65–3·8 inches; no pale eye-brow of white or grey.
  a'. Back streaked with black ..... *platensis*, p. 758.
  b'. Back perfectly uniform ..... *olivascens*, p. 759.
b. Smaller; wing not exceeding 3·5 inches.
  c'. Lateral stripes on the sides of the crown rufous-brown, not black.
    a''. Centre of crown olive.
      a'''. Bill smaller; flanks ashy brown ..... *rufivirgata*, p. 760.
      b'''. Bill longer; flanks drab-brown..... *crassirostris*, p. 761.
    b''. Centre of crown pearly grey ..... *superciliosa*, p. 761.
  d'. Lateral stripes on the sides of the crown black, occasionally with a slight chestnut tinge.... *striaticeps* and allies, [pp. 762–765.

1. Embernagra platensis.

L'Emberise à cinq couleurs, *Montb. Hist. Nat. Ois.* iv. p. 364 (1778).
Plata Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 210 (1783).
Emberiza platensis, *Gm. Syst. Nat.* i. p. 886 (1788); *Bonn. et Vieill. Enc. Méth.* iii. p. 922 (1823).
Habia de Bañado, *Azara, Apunt.* i. p. 363 (1802).
Tanagra decumana, *Licht. Verz. Doubl.* p. 31 (1823).
Embernagra dumetorum, *Less. Traité*, p. 465 (1831).
? Embernagra fabialatu, *Less. t. c.* p. 465.
Embernagra platensis, *D'Orb. Voy. Amér. Mérid., Ois.* p. 284 (1835–44); *Gray, Gen. B.* ii. p. 361 (1844); *Hartl. Ind. Azara*, p. 6 (1847); *Bp. Consp.* i. p. 483 (1850); *Burm. Th. Bras.* iii. p. 224 (1856); *id. Reis. La Plata-St.* ii. p. 485 (1861); *Scl. Cat. Amer. B.* p. 117 (1862); *id. & Salv. P. Z. S.* 1868, p. 140; *Gray, Hand-l. B.* ii. p. 91, no. 7334 (1870); *Pelz. Orn. Bras.* p. 230 (1871); *Hudson, P. Z. S.* 1872, p. 548; *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *White, P. Z. S.* 1882, p. 600; *Salvin, Cat. Strickl. Coll.* p. 233 (1882); *Barrows, Bull. Nutt. Orn. Club*, viii. p. 132 (1883); *Berl. & Jhering, Zeitschr. ges. Orn.* ii. p. 124 (1885).
Emberizoides poliocephalus, *Gray, in Darwin's Voy. 'Beagle,' Birds*, p. 98 (1841).
Embernagra viridis, *Bp. Consp.* i. p. 483 (1850).
Limnospiza platensis, *Cab. Mus. Hein.* Th. i. p. 136 (1850).
Limnospiza minor, *Cab. t. c.* p. 136.

Adult male. General colour above olive-greenish with an ashy shade, rather browner on the lower back and rump, the mantle and back streaked with black centres to the feathers; scapulars like the back; wing-coverts uniform olive-yellow, the greater series pale olive-yellow on their terminal margins and with black shaft-streaks; bastard-wing and primary-coverts externally olive-yellow, dusky brown internally and towards the ends; quills dusky brown, externally olive-yellow, paler on the primaries; the innermost secondaries edged with olive-yellow along the inner web; upper tail-coverts ashy olive, paler at the ends, with indistinct shaft-streaks of

dark brown; tail-feathers olive-brown, externally somewhat brighter olive and fringed with whitish at the ends; crown of head rather greener than the back, streaked with black shaft-lines, the forehead and feathers over the eye more distinctly grey; lores and fore part of cheeks blackish, as well as the feathers below the eye; ear-coverts and sides of face dark ashy grey; cheeks, throat, sides of neck, and fore neck paler and more hoary grey, inclining gradually to isabelline brown on the breast and abdomen; sides of body ashy, rather browner on the flanks; thighs and under tail-coverts isabelline brown, whiter on the edges, some of the outer coverts more ashy; under wing-coverts and axillaries dull olive-yellow, with ashy bases, the edge of the wing brighter yellow; quills below pale brown, ashy along the inner edge: "upper mandible brownish black; lower mandible whitish yellow; iris brownish black" (*Burmeister*). Total length 8·5 inches, culmen 0·65, wing 3·65, tail 3·7, tarsus 1·15.

Young. Very broadly streaked with black, the feathers of the back with whitish edges; crown and hind neck yellowish buff, streaked with black; throat and under surface of body washed with yellow, with some dusky brown streaks on the fore neck.

Hab. Southern Brazil.

a. Ad. sk.	[Chili.]	Zoological Society [P.].
b. Ad. sk.	[Chili.]	
c. Ad. sk.	Maldonado (*C. Darwin*).	Sir W. Burnett and Admiral Fitzroy [P.].
d. Ad. sk.	Monte Video (*C. Darwin*).	Salvin-Godman Coll. (Type of *E. poliocephalus.*)
e. ♂ ad. sk.	Buenos Ayres, March 8, 1881 (*E. W. White*).	Sclater Coll.
f. Ad. sk.	Buenos Ayres.	Sclater Coll.
g. ♂ ad. sk.	Conchitas, Buenos Ayres, Oct. 1866 (*W. H. Hudson*).	Sclater Coll.
h. Ad. sk.	Paraná (*Burmeister*).	Salvin-Godman Coll.
i, k. Juv. sk.	Buenos Ayres.	Henry Drummond, Esq. [C.].
l. Ad. sk.	Brazil.	M. Claussen [P.].

2. Embernagra olivascens.

Emberiza olivascens, *D'Orb. & Lafr. Syn. Av. in Mag. de Zool.* 1837, p. 75.

Embernagra longicauda, *Strickl. Ann. & Mag. Nat. Hist.* xiii. p. 420 (1844); *Gray, Gen. B.* ii. p. 361 (1844); *Bp. Consp.* i. p. 482 (1850); *Gray, Hand-l. B.* ii. p. 91, no. 7342 (1870).

Embernagra viridis, *Burm. J. f. O.* 1860, p. 256.

Embernagra olivascens, *D'Orb. Voy. Amér. Mérid., Ois.* p. 285 (1835–44); *Gray, Gen. B.* ii. p. 361 (1844); *Bp. Consp.* i. p. 483 (1850); *Burm. Reis. La Plata-St.* ii. p. 485 (1861); *Gray, Hand-l. B.* ii. p. 91, no. 7335 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *iid. P. Z. S.* 1879, p. 606; *Salv. Cat. Strickl. Coll.* p. 233 (1882).

Limnospiza olivascens, *Cab. Mus. Hein.* Th. i. p. 136 (1850).

Limnospiza longicauda, *Cab. t. c.* p. 136.

Adult male. General colour above ashy olive, rather more dis-

tinctly washed on the back and rump with olive-yellow; lesser and median coverts olive-yellow; greater coverts, bastard-wing, primary-coverts, and quills brown, externally olive-yellow, more or less ashy on the margins of the inner greater coverts and secondaries; upper tail-coverts like the back; tail-feathers brown, olive-yellow externally; crown of head more distinctly ashy grey than the back; lores dusky blackish; sides of face, ear-coverts, cheeks, and under surface of body ashy grey, becoming paler towards the breast, and whiter on the lower abdomen; sides of body and flanks rather browner; thighs and under tail-coverts isabelline brown; under wing-coverts ashy, edged with yellow; edge of wing yellow; axillaries ashy, with yellow margins; quills below brown, ashy fulvous along the inner edge. Total length 8·5 inches, culmen 0·7, wing 3·8, tail 4·1, tarsus 1·15.

Adult female. Similar in plumage to the male. Total length 8·3 inches, culmen 0·65, wing 3·55, tail 3·75, tarsus 1·15.

Breeding birds lose nearly the whole of the olive-yellow colour on the upper surface, and become very ashy above.

Hab. From Bolivia to Mendoza and the Western Argentine Republic.

a. Ad. sk.	Tilotilo, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
b, c. ♂ ♀ ad. sk.	Mendoza, Feb. 1871 (*Weiss-haupt*).	Sclater Coll.
d, e. ♂ ♀ ad. sk.	Mendoza.	Herr Weisshaupt [C.].
f, g. ♂ ♀ ad. sk.	Mendoza, Feb. 1871 (*Weiss-haupt*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Cosquin, Cordova, Argentine Republic, July 24, 1882 (*E. W. White*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Cosquin, Aug. 16, 1882 (*E. W. White*).	Salvin-Godman Coll.
k. Ad. st.	South America.	Purchased.

3. Embernagra rufivirgata.

Embernagra rufivirgata, *Lawr. Ann. Lyc. N. Y.* v. p. 112, pl. 5. fig. 2 (1851); *Baird, B. N. Amer.* p. 487 (1858); *id. Mex. Bound. Surv.* ii. *Birds*, p. 16, pl. 17. fig. 2 (1858); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 47, pl. 28. fig. 3 (1874); *Merrill, Bull. Nutt. Orn. Club*, i. p. 89 (1876); *id. Proc. U.S. Nat. Mus.* i. p. 128 (1878); *Ridgw. t. c.* p. 249 (1878); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 22 (1878), v. p. 394 (1879); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 181 (1881); *Coues, Check-l. N. Amer. B.* p. 61 (1882); *id. Key N. Amer. B.* 2nd ed. p. 398 (1884); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 411 (1886); *A. O. U. Check-list N. Amer. B.* p. 283 (1886); *Ridgw. Man. N. Amer. B.* p. 435 (1887).

Emberizoides rufivirgata, *Gray, Hand-l. B.* ii. p. 91, no. 7332 (1870).

Adult. Upper surface olivaceous, with a streak on each side of the crown and another through the eyes rufous; lores whitish; sides of head greyish; below white, the breast ashy, the flanks and crissum pale dusky brown, the bend of the wing yellow; upper

mandible rufous horn-colour, the lower one yellowish; feet pale hazel-brown. Total length 6 inches, wing 2·6, tail 2·6, bill from gape 0·6, tarsus 0·95. (*Salvin & Godman.*)

Hab. Rio Grande Valley in Texas, extending into Northern Mexico.

a. Ad. sk.	[Texas?]	Purchased.

I have copied the description given by Messrs. Salvin and Godman for this species, as the only specimen in the Museum collection is marked "California," purchased of Warwick. The size of the bill seems to show that it is the true *E. rufivirgata.*

4. Embernagra crassirostris.

Embernagra rufivirgata (*nec Lawr.*), *Scl. P. Z. S.* 1856, p. 306, 1859, p. 380; *id. Cat. Amer. B.* p. 117 (1862); *Sumichr. Mem. Bost. Soc. N. H.* i. p. 551 (1869); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873).

Embernagra rufivirgata, *β.* crassirostris, *Ridgw. Proc. U.S. Nat. Mus.* i. p. 249 (1878).

Embernagra crassirostris, *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 412 (1886).

Embernagra rufivirgata crassirostris, *Ridgw. Man. N. Amer. B.* p. 435 (1887).

Adult. Above dull olivaceous; sides of the head, breast, flanks, and vent dusky; remainder of the under surface of the body whitish, the bend of the wing dusky: a streak on each side of the crown and another one through the eyes rufescent; the crown itself uniform with the back; bill horn-colour, the mandible yellowish at base; feet pale hazel-brown. Total length 5·4 inches, wing 2·5, tail 2·3, bill from gape 0·6, tarsus 0·95. (*Salvin & Godman.*)

I have copied the description given by Messrs. Salvin and Godman, as they have had the opportunity of comparing authentic specimens of *E. rufivirgata* with *E. crassirostris.*

Hab. Southern Mexico.

a. Ad. sk.	Southern Mexico (*A. Sallé*).	Salvin-Godman Coll.
b. Ad. sk.	Orizaba (*Botteri*).	Sclater Coll.
c. Ad. sk.	Mexico.	J. Gould, Esq. [P.].
d. Ad. sk.	Mexico.	Purchased.

5. Embernagra superciliosa.

Embernagra superciliosa, *Salvin, P. Z. S.* 1864, p. 582; *Frantz. J. f. O.* 1869, p. 301; *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Nutting & Ridgw. Proc. U.S. Nat. Mus.* v. p. 391 (1882); *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 412 (1886).

Embernagra rufivirgata, *Lawr. Bull. U.S. Nat. Mus.* iv. p. 22 (1876, *nec Lawr.* 1851).

Adult (type of species). General colour above light olive-green, greyer on the hind neck and mantle; lesser wing-coverts rather brighter olive-green; median and greater coverts browner, washed

with the same colour as the back; bastard-wing and primary-coverts dusky brown, rather more yellow on the edges; quills dusky brown, externally like the back, a little more olive-yellow on the primaries; upper tail-coverts like the back; tail-feathers brown, olive-yellow on the margins; crown of head pearly grey in the centre, with a broad lateral band of dark chestnut edged with black above the eyebrow, which is very broad, pearly grey, inclining to whitish above the lores; the latter dark chestnut, as also a band along the upper edge of the ear-coverts; upper and under edge of the eyelid whitish; ear-coverts and cheeks pale isabelline brown, becoming whiter on the throat; sides of neck like the back, but a little more ashy; fore neck and breast isabelline brown, the abdomen whiter; sides of body and flanks darker brown, slightly washed with olive; thighs olive-brown; under tail-coverts isabelline buff; under wing-coverts and axillaries olive-yellow, the lower series whitish; edge of wing bright yellow; quills below dusky, ashy fulvous along the inner edge. Total length 5 inches, culmen 0·5, wing 2·4, tail 1·9, tarsus 0·85.

The specimen from Tehuantepec is not quite the same as the Costa-Rica birds. The ash-colour of the crown is darker and the lateral streaks are lighter rufous and not such deep chestnut. If subsequent specimens confirm these characters for the Mexican form, it may be called *E. sumichrasti*.

Hab. Isthmus of Tehuantepec, Mexico; Costa Rica.

a. Ad. sk.	Bebedero, Nicoya, Costa Rica (*E. Arcé*).	Salvin-Godman Coll. (Type of species.)
b. Ad. sk.	Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.
c. Ad. sk.	Costa Rica (*J. Carmiol*).	Sclater Coll.
d. Ad. sk.	Huamela, Tehuantepec, Mexico (*F. Sumichrast*).	Sclater Coll.

6. Embernagra striaticeps.

Embernagra striaticeps, *Lafr. Rev. Zool.* 1852, p. 61; *Scl. & Salv. P. Z. S.* 1864, p. 352; *Cass. Proc. Philad. Acad.* 1865, p. 170; *Lawr. Ann. Lyc. N. Y.* viii. p. 181 (1866); *Salv. P. Z. S.* 1867, p. 142; *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868); *Frantz. J. f. O.* 1869, p. 301; *Salv. P. Z. S.* 1870, p. 190; *Gray, Hand-l. B.* ii. p. 91, no. 7340 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873); *Boucard, P. Z. S.* 1878, p. 56; *Salvin, P. Z. S.* 1883, p. 422; *Nutting & Ridgw. Proc. U.S. Nat. Mus.* vi. p. 401 (1884); *Salvin & Godman, Biol. Cent.-Amer., Aves*, i. p. 414 (1886).

Embernagra conirostris (*nec Bp.*), *Scl. P. Z. S.* 1856, p. 143; *Lawr. Ann. Lyc. N. Y.* vii. p. 332 (1861); *Scl. Cat. Amer. B.* p. 117 (1862, pt.).

Adult male. General colour above dull olive-yellowish; wing-coverts clearer olive-yellow, especially near the edge of the wing; bastard-wing, primary-coverts, and quills dusky brown, edged with olive-yellow, the inner secondaries rather browner externally; upper tail-coverts like the back, but very slightly browner; tail-feathers olive-brown, rather clearer brown externally; crown

of head clear slaty grey, with a broad line of black running from the base of the nostrils to the nape and neck, which is also slaty grey; lores hoary grey, continued into a slaty-grey eyebrow; in front of the eye a blackish spot; eyelid and a streak above the ear-coverts black; upper and lower eyelid white; ear-coverts, cheeks, and sides of neck slaty grey; throat white; fore neck and chest clear slaty grey, the lower breast and abdomen white; sides of body and flanks warm olive-brown, the latter mixed with olive-yellow; thighs olive, ashy whitish on their inner aspect; under tail-coverts olive-yellowish; under wing-coverts and axillaries bright olive-yellow; quills below dusky, ashy along the inner edge. Total length 6·6 inches, culmen 0·7, wing 3·2, tail 2·85, tarsus 1·1.

Hab. Central America, from Nicaragua and Costa Rica to Panama.

a. ♂ ad. sk.	Los Sabalos, Nicaragua, May 5, 1883 (*C. C. Nutting*).	R. B. Sharpe, Esq. [P].
b. Ad. sk.	Tucurriqui, Costa Rica (*E. Arcé*).	Salvin-Godman Coll.
c. Ad. sk.	Bebedero, Costa Rica, March 1864 (*E. Arcé*).	Salvin-Godman Coll.
d. Ad. sk.	Costa Rica (*J. Carmiol*).	Sclater Coll.
e. Ad. sk.	Angostura, Costa Rica, March 28, 1865 (*J. Carmiol*; Sm. no. 41362).	Salvin-Godman Coll.
f. Ad. sk.	Panama (*McLeannan*).	Sclater Coll.
g,h. ♂ ♀ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
i. Ad. sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
k. Ad. sk.	Panama, Jan. 1882 (*A. H. Markham*).	Salvin-Godman Coll.
l. ♀ ad. sk.	Chitra, Veragua (*E. Arcé*).	Salvin-Godman Coll.
m. ♀ ad. sk.	Sante Fé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
n. Ad. sk.	Bugaba, Chiriqui (*E. Arcé*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Cordillera de Tolé, Veragua (*E. Arcé*).	Salvin-Godman Coll.
p. Ad. st.	Panama.	G. Barclay, Esq. [P.].

Subsp. *a.* **Embernagra conirostris.**

Arremon conirostris, *Bp. Consp.* i. p. 488 (1850).
Embernagra conirostris, *Scl. P. Z. S.* 1855, p. 154; *id. Cat. Amer. B.* p. 117 (1862); *id. & Salv. P. Z. S.* 1868, p. 167; *Gray, Hand-l. B.* ii. p. 91, no. 7339 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873).

Adult male. Similar to *E. striaticeps*, but decidedly greyer, the ashy colour extending over the back; flanks, sides of body, and thighs also greyer. Total length 6·3 inches, culmen 0·65, wing 3·15, tail 2·1, tarsus 1·05.

Adult female. Similar to the male. Total length 6·5 inches, culmen 0·65, wing 3, tail 2·2, tarsus 1.

Hab. U.S. Colombia and Venezuela.

a. Ad. sk.	Bogotá.	Purchased.
b. Ad. sk.	Bogotá.	Sclater Coll.
c. ♂ ad. sk.	Bogotá (*J. Crowther*).	Salvin-Godman Coll.

d. ♀ ad. sk.	Santa Marta, Feb. 19, 1879 (*F. Simons*).	Salvin-Godman Coll.
e. Ad. sk.	Santa Marta.	Sclater Coll.
f. ♀ ad. sk.	Carupano, Venezuela, Feb. 18, 1867 (*A. Goering*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Tachira, Venezuela (*A. Goering*).	Salvin-Godman Coll.

Subsp. β. Embernagra chrysoma.

Embernagra chrysoma, *Scl. P. Z. S.* 1860, p. 275; *id. Cat. Amer. B.* p. 117, pl. 11 (1862); *Gray, Hand-l. B.* ii. p. 91, no. 7336 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 32 (1873).
Embernagra striaticeps, *Berl. & Tacz. P. Z. S.* 1883, p. 551, 1885, p. 85.

Adult male (type of species). Very similar to *E. striaticeps*, but altogether paler, so that the head and eyebrow are lighter and more pearly grey; the lower flanks more olive and the thighs distinctly pearly grey. Total length 6·5 inches, culmen 0·7, wing 3·1, tail 2·8, tarsus 1·1.

Young. More olive-yellow than the adult, and lacking the grey and black markings on the crown; the centre of the crown olive-yellowish, with broad lateral stripes of rufous-brown; eyebrow and sides of face olive-yellow, brighter above the lores; under surface of body olive-yellow, browner on the flanks, the chest streaked with dusky brown.

Hab. Ecuador.

a. Ad. sk.	Quito, Ecuador.	J. Gould, Esq.
b. Ad. sk.	Balzar Mountains, Ecuador (*J. Illingworth*).	Salvin-Godman Coll.
c, d. ♂ ad. sk.	Babahoyo, Ecuador (*L. Fraser*).	Sclater Coll. (Types of species.)
e. ♂ juv. sk.	Esmeraldas, Dec. 1859 (*L. Fraser*).	Sclater Coll.

Subsp. γ. Embernagra chloronota.

Embernagra chloronota, *Salvin, P. Z. S.* 1861, p. 202; *id. Ibis*, 1861, p. 353; *Scl. Cat. Amer. B.* p. 117 (1862); *Gray, Hand-l. B.* ii. p. 91, no. 7337 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Boucard, P. Z. S.* 1883, p. 444 (pt.); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 413 (1886).

Adult (type of species). Very similar to *E. striaticeps*, but smaller and altogether greener, the stripes on the head black slightly washed with chestnut; the wing-coverts and outer aspect of quills not nearly so yellow; sides of body and flanks also more distinctly olive-green. Total length 5·3 inches, culmen 0·6, wing 2·5, tail 2·05, tarsus 0·9.

The specimen from Chisec has the head-stripes quite dark chestnut. It may be an adult female.

Hab. From Yucatán to British Honduras and Guatemala.

a. Ad. sk.	Choctum, Vera Paz, Guatemala, Jan. 1862 (*O. S. & F. D. G.*).	Salvin-Godman Coll.
b, c. Ad. sk.	Choctum, Vera Paz (*O. S.*).	Salvin-Godman Coll. (Types of species.)
d. Ad. sk.	Chisec, Vera Paz (*O. S.*).	Sclater Coll.
e, f. Ad. sk.	Vera Paz.	Salvin-Godman Coll.
g. Ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Chable, Yucatan (*F. Gaumer*).	Salvin-Godman Coll.

Subsp. δ. Embernagra verticalis.

Embernagra rufivirgata, *Lawr. Ann. Lyc. N. Y.* ix. p. 201 (1868, *nec Lawr.* 1851).
Embernagra rufivirgata, γ. verticalis, *Ridgw. Proc. U.S. Nat. Mus.* i. p. 249 (1878).
Embernagra chloronota (pt.), *Boucard, P. Z. S.* 1883, p. 444.
Embernagra verticalis, *Salvin & Godman, Biol. Centr.-Amer., Aves,* i. p. 414 (1886).
Embernagra rufivirgata verticalis, *Ridgw. Man. N. Amer. B.* p. 435 (1887).

Adult. Similar to *E. striaticeps*, but much smaller, with a more slender bill, the general aspect of the upper surface more olive-brown, and the stripes on the sides of the crown very decidedly streaked with chestnut. Total length 5·8 inches, culmen 0·65, wing 2·4, tail 2·4, tarsus 0·85.

Hab. Yucatan.

a, b. Ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
c, d. Ad. sk.	Meco Island (*G. F. Gaumer*).	Salvin-Godman Coll.

83. CORYPHOSPIZA.

	Type.
Leptonyx, *Swains. An. in Menag.* p. 314 (1837, *nec* 1832)	C. melanotis.
Coryphospiza, *Gray, List Gen. B.* 1840, p. 47	C. melanotis.
Donacospiza, *Cab. Mus. Hein.* Th. i. p. 136 (1850)	C. albifrons.

Tail of *Coryphospiza albifrons.*

Range. Southern Brazil, Uruguay, and Eastern Argentine Republic.

Key to the Species.

a. No yellow on the axillaries or wing-coverts; sides of body not streaked with black; ear-coverts ashy brown; back ashy olive ..... *albifrons*, p. 766.
b. Axillaries bright olive-yellow; wing-coverts dull olive-yellow; sides of body marked longitudinally with black; ear-coverts black; back chestnut-brown, streaked with black ..... *melanotis*, p. 767.

1. Coryphospiza albifrons.

Cola aguda vientre de canela, *Azara, Apunt.* ii. p. 263 (1802).
Sylvia albifrons, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 276 (1817); *Hartl. Ind. Azara*, p. 15 (1817).
Ammodromus longicaudatus, *Gould in Darwin's Voy. 'Beagle,' Birds*, p. 90, pl. 29 (1841); *Bp. Consp.* i. p. 482 (1850).
Donacospiza albifrons, *Cab. Mus. Hein.* Th. i. p. 136 (1850); *Scl. & Salv. P. Z. S.* 1869, p. 161; *iid. Nomencl. Av. Neotr.* p. 30 (1873).
Poospiza albifrons, *Burm. Reis. La-Plata St.* ii. p. 484 (1861).
Emberiza oxyrhyncha, *Natterer, MSS., undè*
Poospiza oxyrhyncha, *Scl. P. Z. S.* 1864, p. 608; *Pelz. Orn. Bras.* p. 229 (1871).
Emberizoides albifrons, *Gray, Hand-l. B.* ii. p. 90, no. 7329 (1870).

Adult male. General colour above brown, streaked with dusky blackish centres to the feathers; the lower back and rump uniform; lesser wing-coverts ashy, median and greater coverts dark brown, edged with paler brown; bastard-wing, primary-coverts, and quills dusky brown, with ashy margins, browner on the inner secondaries; upper tail-coverts more fulvous brown than the back; tail-feathers pointed, dark brown, with ashy margins, the outer ones fringed with white at the end of the inner web; crown of head ashy grey, with dusky centres to the feathers; hind neck uniform ashy brown; lores and a tolerably defined eyebrow buffy whitish; eyelid dusky; feathers in front of and below the eye dusky blackish; ear-coverts dark ashy grey; cheeks, throat, and under surface of body tawny buff, rather paler on the abdomen; sides of body and flanks somewhat washed with brown; thighs brown; under tail-coverts pale tawny buff like the abdomen; under wing-coverts and axillaries like the breast, with ashy bases; quills below dusky brown, ashy along the inner edge. Total length 5·5 inches, culmen 0·45, wing 2·55, tail 2·7, tarsus 0·75.

Adult female. Similar to the male, but rather paler in colour. Total length 5·7 inches, culmen 0·5, wing 2·45, tail 2·65, tarsus 0·8.

Hab. The same as that of the genus.

a. ♀ ad. sk.	Curytiba, Brazil (*J. Natterer*).	Sclater Coll. (Type of *Poospiza oxyrhyncha*).
b. ♂ ad. sk.	Curytiba, May 28, 1820 (*J. Natterer*).	Salvin-Godman Coll.
c. Ad. sk.	Paysandu, Uruguay (*Gibson*).	Sclater Coll.

d. ♂ ad. sk.	Conchitas, Buenos Ayres (*W. H. Hudson*).	Sclater Coll.
e. Ad. sk.	Buenos Ayres (*Haslehust*).	Salvin-Godman Coll.
f. Ad. sk.	Campana Railway, Buenos Ayres, June 24.	H. Durnford, Esq. [C.].
g. Ad. st.	Maldonado.	Sir W. Burnett and Admiral Fitzroy [P.].
h. Ad. sk.	Maldonado (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
i. Ad. sk.	Monte Video (*C. Darwin*).	Voy. H.M.S. 'Beagle.' (Type of *Ammodromus longicaudatus*, Gould.)

2. Coryphospiza melanotis.

Emberizoides melanotis, *Temm. Pl. Col.* iii. pl. 114. fig. 1 (1824); *Gray, Gen. B.* ii. p. 360 (1844); *Bp. Consp.* i. p. 483 (1850); *Burm. Th. Bras.* Th. iii. p. 226 (1856); *Scl. Cat. Amer. B.* p. 118 (1862); *Gray, Hand-l. B.* ii. p. 90, no. 7330 (1870); *Pelz. Orn. Bras.* p. 230 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873).

Leptonyx melanotis, *Swains. An. in Menag.* p. 314 (1837).

Coryphospiza melanotis, *Gray, List Gen. B.* p. 47 (1840).

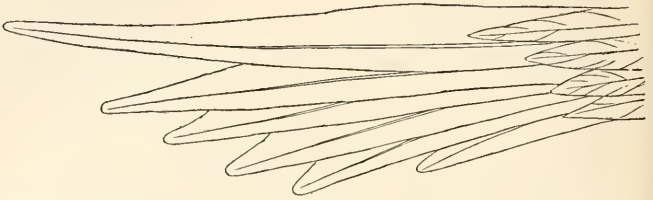
Adult male. General colour above brown, broadly streaked with chestnut, blackish along the centres of the feathers; these black streaks absent on the lower back and rump, but strongly developed on the under tail-coverts; scapulars rather browner; lesser wing-coverts olive-yellow; median and greater coverts dusky brown, externally reddish brown, the latter series more ashy; bastard-wing, primary-coverts, and quills dusky brown, externally olive-yellow, browner on the secondaries: first primary margined with white; centre tail-feathers reddish brown, lighter brown on the edges, the remainder black with an ashy-brown spot at the end of the inner web, the outer ones having a white spot at the end, increasing in extent towards the outermost and extending some way along its outer web; crown of head blackish, the feathers edged with ashy grey; hind neck ashy grey, with a few reddish-brown streaks; lores, feathers below the eye, and ear-coverts black, surmounted by a broad eyebrow of buffy white; cheeks, throat, and under surface of body buffy white, with a black patch on each side of the upper breast, the adjacent feathers mottled, being black internally and white externally; sides of body and flanks streaked with rufous-brown and black centres to the feathers; thighs and under tail-coverts buffy white; under wing-coverts and axillaries bright yellow, especially on the edge of the wing; quills below dusky, ashy along the inner edge. Total length 5 inches, culmen 0·5, wing 2·35, tail 1·8, tarsus 0·7.

Hab. Southern Brazil.

a. Ad. sk.	Southern Brazil (*J. Natterer*).	Salvin-Godman Coll.
b. Ad. sk.	Brazil.	Sclater Coll.

84. EMBERIZOIDES.

Type.
Emberizoides, *Temm. Pl. Col.* iii. livr. 19 (1824) ..... E. macrurus.
Tardivola, *Swains. Classif. B.* ii. p. 281 (1837) ..... E. macrurus.



Tail of *Emberizoides macrurus*.

Range. Over the greater part of South America.

1. Emberizoides macrurus.

Long-tailed Finch, *Lath. Gen. Syn.* ii. pt. i. p. 310 (1783).
Fringilla macroura, *Gm. Syst. Nat.* i. p. 918 (1788).
Passerina sphenura, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 25 (1817) *.
Emberizoides macrurus, *Gray, Gen. B.* ii. p. 360 (1844); *Bp. Consp.* i. p. 482 (1850); *Scl. P. Z. S.* 1856, p. 30; *Burm. Reis. La Plata-St.* ii. p. 485 (1861); *Scl. Cat. Amer. B.* p. 118 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *iid. P. Z. S.* 1875, p. 237, 1879, p. 507; *Salv. Ibis*, 1885, p. 216.
Tardivola macroura, *Cab. Mus. Hein.* Th. i. p. 135, note (1850).

Adult male. General colour above striped, brown with a faint tinge of olive-yellow, all the feathers broadly centred with black, less distinctly on the rump, which is more rufescent, the upper tail-coverts also rufescent with more distinct streaks of black; lesser and median coverts olive-green; greater coverts black, broadly edged with olive-green; bastard-wing, primary-coverts, and quills blackish, edged with olive-green, browner on the inner greater coverts and secondaries; tail-feathers dark brown, externally ashy brown or ashy olive; crown of head brown like the back and similarly streaked with black; lores white, as also a ring round the eye; a faint eye-brow of ashy; below the eye a blackish streak; ear-coverts ashy brown, with faintly indicated whitish shaft-lines; cheeks white, the hinder part brown; throat white, the lower throat, fore neck, and chest pale brown, the breast and abdomen white; sides of body and flanks pale brown; on the fore neck a few streaks of dusky brown; thighs brown like the flanks; under tail-coverts dusky brown, edged with whitish, somewhat tinged with fulvous and centred with

* Vieillot's name has always been restricted to the Brazilian bird, but he described a specimen from Cayenne, the same locality as that of Latham's "Long-tailed Finch," and therefore *P. sphenura* of Vieillot is a pure synonym of *F. maeroura* of Gmelin.

black; under wing-coverts and axillaries whitish, with yellow margins; edge of wing bright yellow; quills below dusky, ashy along the inner edge. Total length 7·5 inches, culmen 0·65, wing 2·8, tail 4·8, tarsus 1·0.

Adult female. Similar to the male, but smaller and not quite so brown underneath. Total length 6·7 inches, culmen 0·6, wing 2·65, tail 3·2, tarsus 0·95.

Young female. More reddish brown than the adults and without the olive or ashy tinge; eyebrow brown; under surface olive-yellowish, browner on the fore neck, chest, and sides of body.

Young male. Recognizable by its superior size. Differs from the adults only in its yellow under surface with dusky spots on the lower throat; the flanks also streaked with blackish.

Hab. Colombia, Venezuela, and Guiana.

a. Ad. sk.	Bogotá (*G. Crowther*).	Salvin-Godman Coll.
b. Ad. sk.	Bogotá.	Sclater Coll.
c. ♂ ad. sk.	Medellin.	T. K. Salmon, Esq. [C.].
d, e. ♂ ♀ ad. sk.	Medellin (*T. K. Salmon*).	Salvin-Godman Coll.
f. ♂ ad. sk.	San Cristobal, Venezuela (*A. Goering*).	Sclater Coll.
g. Ad. sk.	Trinidad.	Sclater Coll.
h, i. Ad. sk.	Cayenne.	Sclater Coll.
k, l. ♂ ♀ ad. sk.	Merumé Mountains, British Guiana, June 1881 (*H. Whitely*).	Salvin-Godman Coll.
m. ♂ juv. sk.	Merumé Mountains, July 1881 (*H. W.*).	Salvin-Godman Coll.
n. ♀ juv. sk.	Roraima, Nov. 10, 1881 (*H. W.*).	Salvin-Godman Coll.
o. ♂ ad.; *p*. ♂ juv. sk.	Roraima, Dec. 1881 (*H. W.*).	Salvin-Godman Coll.

Subsp. *a*. **Emberizoides herbicola.**

Cola aguda encuentro amarillo, *Azara, Apunt.* ii. p. 257 (1802).
Sylvia herbicola, *Vieill. N. Dict. d'Hist. Nat.* xi. p. 192 (1817).
Emberizoides marginalis, *Temm. Pl. Col.* iii. pl. 114. fig. 2 (1824).
Sphenura fringillaris, *Licht. Verz. Doubl.* p. 42 (1823).
Embernagra macrura (*nec Gm.*), *D'Orb. Voy. Amér. Mérid., Ois.* p. 285 (1835–44).
Tardivola sphenura (*nec V.*), *Swains. Classif. B.* ii. p. 281 (1837).
Emberizoides macrurus (*nec Gm.*), *Gray, Gen. B.* ii. p. 360 (1844); *Hartl. Ind. Azara*, p. 25 (1847); *Burm. Th. Bras.* iii. p. 225 (1856); *id. Reis. La Plata-St.* ii. p. 485 (1861).
? Emberizoides megarhyncha, *Bp. Consp.* i. p. 482 (1850); *Gray, Hand-l. B.* ii. p. 90, no. 7328 (1870).
Tardivola marginalis, *Cab. Mus. Hein. Th.* i. p. 135 (1850).
Emberizoides sphenurus (*nec V.*), *Scl. Cat. Amer. B.* p. 118 (1862); *Gray, Hand-l. B.* ii. p. 90, no. 7327 (1870); *Pelz. Orn. Bras.* p. 230 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *iid. P. Z. S.* 1879, p. 607; *Salv. Cat. Strickl. Coll.* p. 234 (1882).

Adult male. Similar to *E. macrurus*, and differing only in its

somewhat smaller size and uniform under tail-coverts: "upper mandible brown, the edge of the upper and lower mandible clear yellow; iris greyish brown" (*Burmeister*). Total length 7 inches, culmen 0·55, wing 2·9, tail 3·7, tarsus 0·9.

The uniform under tail-coverts do not seem to be absolutely constant in this race, and a female from Pelotas has them distinctly streaked with blackish. It appears to me very doubtful whether *E. sphenurus* is separable even as a race from *E. macrurus*.

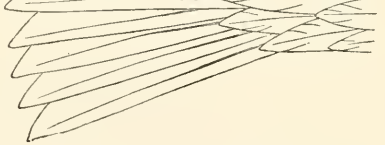
Hab. From Lower Amazonia throughout Brazil to Bolivia.

a. Ad. sk.	Brazil.	Sclater Coll.
b. Ad. sk.	Brazil.	M. Claussen [P.].
c. ♂ ad. sk.	Island of Mexiana, Lower Amazons, Dec. 1848 (*A. R. Wallace*).	Salvin-Godman Coll.
d, *e*. Ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll
f. Ad.; *g*, *h*. Juv. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Ypanema, Brazil, May 23, 1819 (*J. Natterer*).	Salvin-Godman Coll.
k. ♀ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
l. Ad. sk.	Bolivia (*Bridges*).	Sclater Coll.

85. SPIZA.

Type.

Spiza, *Bp. Journ. Philad. Acad.* iv. p. 45 (1824) ..... S. americana.
Euspiza, *Bp. Saggio Distr. Met. An. Vertebr.* p. 141 (1832, *teste Ridgw.*) ..... S. americana.
Euspina, *Cab. Mus. Hein.* Th. i. p. 133 (1850) ..... S. americana.



Tail of *Spiza americana*.

Range. Eastern United States to the Rocky Mountains, north to Massachusetts, New York, Wisconsin and Minnesota, and south in winter throughout Central America to Colombia. (*Cf.* A. O. U. Check-list, p. 289.)

1. Spiza americana.

Black-throated Bunting, *Lath. Gen. Syn.* ii. pt. i. p. 197, pl. 44 (1783); *Penn. Arctic Zool.* ii. p. 363 (1785).
Yellow-throated Finch, *Penn. Arctic Zool.* ii. p. 374 (1785).
Emberiza americana, *Gm. Syst. Nat.* i. p. 872 (1788); *Wilson, Amer. Orn.* i. p. 54, pl. 3. fig. 2 (1808); *Audub. B. Amer.* pl. 384; *id. Orn. Biogr.* iv. p. 579 (1838); *id. B. Amer.* 8vo, iii. p. 58, pl. 156 (1841).

Fringilla flavicollis, *Gm. Syst. Nat.* i. p. 926 (1788).
Fringilla (Spiza) americana, *Bp. Obs. Wils.* 1825 (*teste Coues*).
Fringilla americana, *Bp. Syn.* p. 107 (1828, *teste Coues*).
Cœlebs americana, *Less. Traité*, p. 441 (1831).
Emberiza nigricollis, *Nordm. in Erman Reis.* p. 11, Taf. 5 (1835).
Euspiza americana, *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Gray, Gen. B.* ii. p. 376 (1844); *Bp. Consp.* i. p. 469 (1850); *Woodh. in Sitgr. Rep. Zuni & Color. R.* p. 87 (1853); *Scl. P. Z. S.* 1856, p. 142, 1857, p. 205; *Baird, B. N. Amer.* p. 494 (1858); *Scl. & Salv. Ibis*, 1859, p. 18; *Cassin, Proc. Philad. Acad.* 1860, p. 140; *Lawr. Ann. Lyc. N. Y.* vii. p. 208 (1861); *Scl. & Salv. P. Z. S.* 1864, p. 353; *Dresser, Ibis*, 1865, p. 490; *Lawr. Ann. Lyc. N. Y.* viii. p. 181 (1866); *Salv. P. Z. S.* 1867, p. 142; *Lawr. Ann. Lyc. N. Y.* ix. p. 103 (1868); *Frantz. J. f. O.* 1869, p. 301; *Sumichr. Mem. Bost. Soc. N. H.* i. p. 552 (1869); *Gray, Hand-l. B.* ii. p. 112, no. 7672 (1870); *Scl. & Salv. P. Z. S.* 1870, p. 836; *Salv. P. Z. S.* 1870, p. 190; *Wyatt, Ibis*, 1871, p. 328; *Allen, Bull. Mus. C. Z. Cambr.* iii. p. 177 (1872); *Coues, Key N. Amer. B.* p. 148 (1872); *Scl. & Salv. Nomencl. Av. Neotr.* p. 33 (1873); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 65, pl. 28. fig. 11 (1874); *Coues, B. N.-West*, p. 164 (1874); *Lawr. Mem. Bost. Soc.* ii. p. 277 (1874); *Hensh. Rep. Zool. Expl.* 100*th Merid.* p. 295 (1875); *Lawr. Bull. U.S. Nat. Mus.* iv. p. 21 (1876); *Sennett, Bull. U.S. Geol. Surv.* iv. p. 19 (1878), v. p. 392 (1879); *Merrill, Proc. U.S. Nat. Mus.* i. p. 128 (1878); *Scl. & Salv. P. Z. S.* 1879, p. 508.
Euspina americana, *Cab. Mus. Hein.* Th. i. p. 133 (1850).
Spiza americana, *Ridgway, Proc. U.S. Nat. Mus.* iii. pp. 3, 182 (1881); *Coues, Check-list N. Amer. B.* p. 58 (1882); *Nutting & Ridgw. Proc. U.S. Nat. Mus.* v. p. 391 (1882); *Coues, Key N. Amer. B.* 2nd ed. p. 387 (1884); *Townsend, Auk*, ii. p. 106 (1885); *Loomis, t. c.* p. 192; *Agersb. t. c.* p. 281; *A. O. U. Check-list N. Amer. B.* p. 289 (1886); *Salvin & Godman, Biol. Centr.-Amer., Aves*, i. p. 416 (1886).

Adult male. General colour above brown, washed with ashy on the mantle and upper back, which are centred with black stripes; lower back and rump uniform ashy brown; scapulars ashy brown, chestnut externally; lesser and median coverts uniform chestnut; greater coverts blackish, externally pale reddish brown, narrowly margined with ashy fulvous; bastard-wing blackish brown; primary-coverts and quills blackish brown, edged with ashy brown, the inner secondaries more broadly margined with reddish brown; upper tail-coverts and tail-feathers brown, edged with ashy brown, and fringed with whitish along the inner web, which has an indistinct pale spot about one third distance from the tip; crown of head and hind neck ashy grey, olive-yellow on the fore part of the crown; lores white, fringing the base of the forehead, and surmounted by an eyebrow of clear yellow; eyelid pale yellow, with a white spot below and a dusky mark in front and behind; ear-coverts dark ashy grey, slightly washed with olive-yellow; cheeks white, with a yellow mark below the eye; sides of throat also white, like the chin and upper throat; centre of fore neck black, forming a mark which extends up the lower throat and borders the yellow

cheek-spot, forming a crescent on its upper margin; sides of fore neck and breast bright yellow, becoming paler towards the abdomen, which is whitish; sides of breast ashy grey; sides of body and flanks pale ashy brown; thighs whitish, externally yellow; under tail-coverts white; under wing-coverts and axillaries white, with bright yellow bases; edge of wing bright yellow; quills below dusky, ashy along their inner edge: "bill light blue; feet and claws light brownish red; iris hazel" (*Audubon*). Total length 6 inches, culmen 0·6, wing 3·3, tail 2·4, tarsus 0·9.

Adult female. Different from the male. General colour above Sparrow-like, the mantle and upper back light brown, streaked with black; the lower back and rump uniform ashy brown; lesser wing-coverts like the back; median coverts blackish brown, tipped with rufous-brown and edged with buffy white; greater coverts and quills blackish brown, edged with whity brown, and subterminally washed with rufous on the inner greater coverts and secondaries; upper tail-coverts and tail-feathers dark brown, edged with whity brown; crown of head and hind neck dark ashy, streaked with dusky brown: lores dusky whitish; an indistinct eyebrow of pale yellow; eyelid dull whitish; ear-coverts dark ashy brown, with whitish shaft-lines; cheeks and throat white, with a yellow mark on the former; in the centre of the throat a few black spots, as well as a few below the yellow cheek-spot; fore neck and chest yellow; breast ashy brown, tinged with yellow in the centre; abdomen and under tail-coverts dull whitish; sides of body and flanks ashy brown, the lower flanks with narrow blackish streaks; thighs brown; under wing-coverts and axillaries ashy brown, tinged with yellow; quills below dusky, ashy along the inner edge. Total length 5·2 inches, culmen 0·55, wing 3·8, tail 2, tarsus 0·85.

Young birds resemble the adult female, but have the head brown like the back, and similarly streaked with black; the ear-coverts uniform pale ashy brown; scarcely any trace of yellow on the eyebrow or cheeks; the under surface of the body whitish, with the fore neck yellowish buff, with a few streaks of black, which extend upwards along the side of the throat; the centre of the breast tinged with yellow, the dark streaks being less apparent, but becoming well characterized again on the flanks, which are pale brown like the sides of the body.

The characters of the adult male are very gradually assumed; the yellow chest and black throat are often found very feebly developed in specimens killed before the breeding-season has commenced. The uniform chestnut on the wing-coverts seems to be the last sign of full maturity, and some of the specimens examined, though killed in the breeding-season, and otherwise in complete plumage, still have the wing-coverts margined with rufous, as in the adult female.

There does not seem to be much difference in the *winter plumage of the adults*, but the male has the black throat-spot obscured by ashy tips to the feathers.

Adult females in breeding-plumage vary somewhat. In one specimen the fore neck is only slightly tinged with yellow, and is

narrowly streaked with dark brown; in another specimen the spots constituting the throat-patch are very pale brown.

Hab. Eastern United States to the Rocky Mountains, north to Massachusetts, New York, Wisconsin, and Minnesota (*A. O. U. Check-l.* p. 289). In winter throughout Central America to Colombia, Venezuela, and Guiana.

a. ♂ ad. sk.	Chicago, Illinois, spring, 1874 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
b. ♂ ad. sk.	Chicago (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
c. ♂ ad. sk.	Hyde Park, Ill., June 26, 1881 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
d. ♀ ad. sk.	Washington Heights, Ill., June 19, 1880 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
e, f. ♀ ad. sk.	Washington Heights, Ill., July 17, 1879 (*H. K. Coale*).	R. B. Sharpe, Esq. [P.].
g, h. ♂ ad. sk.	Wheatland, Indiana, May 5, 1883 (*R. Ridgway*: Sm. nos. 90323–25).	U.S. Nat. Mus. [P.].
i. ♂ ad. sk.	Washington, D.C. (*E. Coues*).	Sclater Coll.
k. ♂ ad. sk.	Washington, D.C., May 13, 1859 (*E. Coues*; Sm. no. 29096).	Salvin-Godman Coll.
l. ♂ ad. sk.	Jalapa, S. Mexico (*De Oca*).	Salvin-Godman Coll.
m–r. ♂; *s, t, u.* ♀ ad. sk.	Cozumel Island, April (*G. F. Gaumer*).	Salvin-Godman Coll.
v–r'. ♂ ad. et imm.; *s'–x'.* ♀ ad. sk.	Ruatan Island (*G. F. Gaumer*).	Salvin-Godman Coll.
y'. ♂ ad. sk.	Half Moon Key, British Honduras, May 10, 1862 (*O. S.*).	Salvin-Godman Coll.
z', a. ♂ ♀ ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll.
β. [♂] ad. sk.	Vera Paz, Guatemala (*Hague*).	Salvin-Godman Coll.
γ. [♂] ad.; *δ.* [♂] juv. sk.	Retalhuleu, Guatemala, Sept. 1862 (*O. S.*).	Salvin-Godman Coll.
ε. ♂ juv. sk.	Barranco Hondo, Guatemala, Oct. 23, 1873 (*O. S.*).	Salvin-Godman Coll.
ζ. [♂] ad. sk.	Angostura, Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.
η. Imm. sk.	Costa Rica (Sm. no. 55942).	U.S. Nat. Mus. [P.].
θ. [♀] juv. sk.	Nicoya, Costa Rica, March 1864 (*E. Arcé*).	Salvin-Godman Coll.
ι, κ. ♂ ad.; *λ.* [♀] ad. sk.	Chitra, Panama (*E. Arcé*).	Salvin-Godman Coll.
μ. [♂] ad. sk.	Chiriqui, Panama (*E. Arcé*).	Salvin-Godman Coll.
ν. [♂] ad. sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
ξ. ♀ juv. sk.	Panama (*McLeannan*).	Sclater Coll.
o. ♂ juv. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
π. ♂ ad. sk.	Antioquia, U.S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
ρ. [♂] ad. sk.	Bogotá (*G. Crowther*).	Salvin-Godman Coll.
σ. [♂] imm. sk.	Bogotá, U.S. Colombia.	Sclater Coll.
τ. [♂] ad. sk.	Venezuela (*Spence*).	Salvin-Godman Coll.
υ, φ. ♂ ad. sk.	Cayenne.	Purchased.

2. Spiza townsendi.

Emberiza townsendi, *Aud. B. Amer.* pl. 400. fig. 4; *id. Orn. Biogr.* iii. p. 183 (1834), v. p. 90 (1839); *id. Syn.* p. 101 (1839).
Euspiza townsendi, *Bp. Comp. List B. Eur. & N. Amer.* p. 32 (1838); *Coues, Key N. Amer. B.* p. 148 (1872); *Baird, Brewer, & Ridgw. Hist. N. Amer. B.* ii. p. 68 (1874); *Ridgw. Proc. U.S. Nat. Mus.* iii. p. 182 (1881); *Coues, Key N. Amer. B.* 2nd ed. p. 387 (1884); *Brewster, Auk*, i. p. 191 (1884); *A. O. U. Check-list N. Amer. B.* p. 354 (1886).

Male. "Upper parts, head, and neck all round, sides of body, and fore part of breast slate-blue; the back and upper surface of wings tinged with yellowish brown; the interscapular region streaked with black. A superciliary and maxillary line, chin and throat, and central line of underparts from the breast to crissum, white; the edge of the wing, and a gloss on the breast and middle of belly, yellow. A black-spotted line from the lower corner of the lower mandible down the side of the throat, connecting with a crescent of streaks in the upper edge of the slate portion of the breast. Length 5·75, wing 2·86, tail 2·56." (*Baird, Brewer, & Ridgway.*)

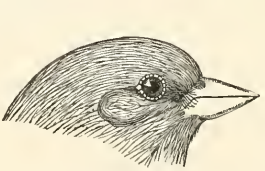
Hab. Chester County, Pennsylvania.

Only a single specimen known. "Its peculiarities cannot be accounted for by hybridism, nor probably by individual variation" (*A. O. U. Check-list, l. c.*). Dr. Coues suggests that it may be a hybrid between *S. americana* ♀ and *Guiraca cærulea* ♂.

86. PSEUDOCHLORIS.

Type.

Orospina, *Cab. J. f. O.* 1883, p. 108 (*nec Kaup*, 1829).... P. pratensis.
Sycalis, pt., *auct. recent.*



Head of *Pseudochloris aureiventris.*

Range. The greater part of South America from Guiana and Colombia southward.

Key to the Species.

a. No white patch on the outer tail-feathers.
  a'. Quills externally edged with bright yellow.
    a''. Head yellow like the rest of the upper surface ..... *lutea*, p. 775.
    b''. Sides of body yellow; head grey like the back; fore part of crown olive-yellow; sides of body ashy ..... *luteocephala*, p. 776.

b'. Quills externally edged with ashy.
c''. Mantle ashy grey, contrasting with the olive-yellow rump; sides of body yellow.. *uropygialis*, p. 776.
d''. Mantle olive-yellow or ashy, washed with olive, not contrasting with the olive-yellow rump; sides of body light ashy brown.
a'''. Much larger; wing 3·5 inches; bright yellow over the eye..... *aureiventris*, p. 777.
b'''. Smaller; wing 3·05 inches; no yellow over the eye..... *mendozæ*, p. 778.
b. A large white patch on the outer tail-feathers; back thickly streaked with black..... *pratensis*, p. 779. / *citrina*, p. 778.

1. Pseudochloris lutea.

Emberiza lutea, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 74.
Sycalis chloris, *Tschudi & Cab. Faun. Peruan., Aves*, p. 216 (1846); *Scl. & Salv. P. Z. S.* 1868, p. 568, 1869, p. 153; *Tacz. Orn. Pérou*, iii. p. 57 (1886).
Crithagra chloropsis, *Bp. Consp.* i. p. 521 (1850).
Sycalis chloropsis, *Burm. J. f. O.* 1860, p. 247; *id. Reis. La Plata-St.* ii. p. 489 (1861).
Fringilla chloris, *Gray, Hand-l. B.* ii. p. 84, no. 7242 (1870).
Sycalis lutea, *Scl. Ibis*, 1872, p. 46, pl. 2. fig. 2; *id. & Salv. Nomencl. Av. Neotr.* p. 35 (1873); *id. P. Z. S.* 1879, p. 607; *Scl. P. Z. S.* 1881, p. 487; *Tacz. Orn. Pérou*, iii. p. 56 (1886).

Adult male. General colour above bright olive-yellow, pure yellow on the rump and upper tail-coverts; lesser and median coverts clear yellow; greater coverts dusky, externally clear yellow; bastard-wing, primary-coverts, quills, and tail-feathers dark brown, externally edged with bright yellow; crown of head bright olive-yellow; lores and eyelids brighter yellow; ear-coverts and cheeks deep golden yellow; throat and under surface of body golden yellow, brighter yellow on the breast, abdomen, and under tail-coverts; sides of body and flanks a little duller yellow; thighs bright yellow; under wing-coverts and axillaries pale yellow, whitish at the base; quills below dusky, ashy along the inner edge. Total length 5·5 inches, culmen 0·45, wing 3·2, tail 1·9, tarsus 0·65.

It is apparently only very old males that attain to the bright golden or canary-coloured plumage, the younger males being decidedly greener.

The *adult female* differs from the male in being browner, with more or less of an olive-yellow tinge; the lower back, rump, and upper tail-coverts are greenish yellow; a narrow line over the eye, sides of face, and under surface of body olive-yellow, brighter yellow on the abdomen; sides of body ashy brown. Total length 4·9 inches, culmen 0·4, wing 2·8, tail 1·8, tarsus 0·7.

Hab. Western Argentine Republic to Bolivia and Peru.

a. ♂ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
b. Ad. sk.	Bolivia.	W. Bridges [C.].
c. Ad. sk.	Tinta, Peru, June 23.	H. Whitely [C.].
d. ♂ ad. sk.	Tinta, Peru, June 23 (*H. W.*).	Sclater Coll.

e. ♂ ad. sk.	Arequipa, Peru, March 25 (*H. W.*).	Sclater Coll.
f. ♂ ad. sk.	Arequipa, Peru.	Sclater Coll.
g. ♂ juv. sk.	Arequipa, Peru, May 25, 1868.	Salvin-Godman Coll.
h. ♀ ad. sk.	Andes of Lima (*W. Nation*).	Sclater Coll.

2. Pseudochloris luteocephala.

Emberiza luteocephala, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 74; *D'Orb. Voy. Amér. Mérid., Ois.* p. 360, pl. 44. fig. 2 (1835–44).
Crithagra luteocephala, *Bp. Consp.* i. p. 521 (1850).
Fringilla luteocephala, *Gray, Hand-l. B.* ii. p. 84, no. 7224 (1870).
Sycalis luteocephala, *Scl. Ibis*, 1872, p. 46; *id. & Salv. Nomencl. Av. Neotr.* p. 35 (1873); *iid. P. Z. S.* 1879, p. 607.

Adult male. General colour above pale ashy brown, lighter ashy on the hind neck, lower back, rump, and upper tail-coverts; lesser wing-coverts olive-yellow; median and greater coverts dusky brown, externally olive-yellow; the inner greater coverts ashy externally like the inner secondaries; bastard-wing, primary-coverts, and quills dusky brown, edged with bright olive-yellow; tail-feathers dusky brown, edged with yellow; crown of head olive-yellow, the hinder crown, occiput, and nape light ashy brown; lores, feathers round the eye, and fore part of cheeks orange-yellow; ear-coverts, cheeks, throat, and under surface of body bright yellow; sides of neck, sides of fore neck, of breast, and flanks pale ashy brown; lower abdomen whitish; thighs ashy, washed with yellow; under tail-coverts bright yellow; under wing-coverts and axillaries pale ashy with yellow margins; quills below dusky, ashy whitish along the inner edge. Total length 5·4 inches, culmen 0·4, wing 3·05, tail 2·1, tarsus 0·7.

Hab. Bolivia.

a, b. ♂ ad. et jun. sk.	Bolivia.	Mr. Bridges [C.].

3. Pseudochloris uropygialis.

Emberiza uropygialis, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 75.
Crithagra pentlandi, *Bp. Consp.* i. p. 521 (1850).
Fringilla pentlandi, *Gray, Hand-l. B.* ii. p. 84, no. 7234 (1870).
Sycalis uropygialis, *Scl. Ibis*, 1872, p. 47; *id. & Salv. Nomencl. Av. Neotr.* p. 35 (1873); *Tacz. P. Z. S.* 1874, p. 522; *Scl. P. Z. S.* 1886, p. 397; *Tacz. Orn. Pérou*, iii. p. 58 (1886).

Adult male. General colour above uniform ashy grey on the mantle and upper back; lower back, rump, and upper tail-coverts olive-yellow, brighter on the latter; lesser wing-coverts olive-yellow: median coverts uniform ashy; greater coverts, bastard-wing, primary-coverts, and quills black, all edged with ashy grey, rather more hoary on the margins; tail-feathers blackish, margined with yellow, whitish towards the ends; crown of head olive-yellow, rather brighter on the forehead and over the eye; lores ashy; eyelid yellowish white; ear-coverts olive-yellow; cheeks and under

surface of body bright yellow; sides of body and flanks slightly more olive; thighs whitish ashy, washed with yellow; under wing-coverts and axillaries bright yellow; quills below dusky, whitish along the inner edge. Total length 5 inches, culmen 0·45, wing 3·5, tail 1·7, tarsus 0·75.

Adult female. Similar to the male, but more olive on the head and rump and upper tail-coverts; the mantle and wings browner and not so ashy; lores ashy; eyelid and chin ashy whitish; cheeks and under surface of body bright olive-yellow, the sides of the breast and sides of body ashy brown, with dusky streaks; thighs light ashy; under tail-coverts bright yellow; under wing-coverts and axillaries light ashy, washed with yellow. Total length 5 inches, culmen 0·45, wing 3·25, tail 1·65, tarsus 0·7.

Hab. Bolivia and Southern Peru.

a, b. ♂; *c.* ♀ ad. sk. Junin, Peru, May (*Jelski*). Sclater Coll.

4. Pseudochloris aureiventris.

Sycalis aureiventris, *Philippi & Landbeck, Arch. f. Naturg.* 1864, p. 49; *id. Cat. Aves Chilenas*, p. 24; *Scl. Ibis*, 1867, p. 323; *id. Ibis*, 1872, p. 47; *id. & Salv. Nomencl. Av. Neotr.* p. 35 (1873); *Scl. P. Z. S.* 1886, p. 397.

Fringilla aureiventris, *Gray, Hand-l. B.* ii. p. 84, no. 7227 (1870).

Adult male. General colour above olive-yellow, inclining to old-gold colour, the feathers more or less edged with ashy, with faint dusky streaks on the mantle and upper back; lesser wing-coverts olive-yellow; median and greater coverts, bastard-wing, primary-coverts, and quills dark brown, edged with ashy, inclining to hoary grey on the primaries, with a slight tinge of olive-yellow here and there; upper tail-coverts like the rump; tail-feathers dark brown, edged with bright olive-yellow, whiter towards the ends; crown of head entirely olive-yellow, or old-gold colour, as well as the sides of the face; lores and eyelid a little brighter yellow; ear-coverts somewhat obscured by ashy margins; cheeks and under surface of body brighter olive-yellow, becoming paler towards the lower abdomen and under tail-coverts; sides of body, flanks, and thighs pale ashy brown; under wing-coverts and axillaries olive-yellow, with ashy bases; quills below ashy, whitish along the inner edge. Total length 5·7 inches, culmen 0·5, wing 3·6, tail 2·2, tarsus 0·7.

Adult female. Different from the male. Uniform ashy brown above, with a faint wash of olive-yellow here and there, particularly distinct on the lesser wing-coverts, rump, and upper tail-coverts; wings dusky brown, the feathers edged with ashy grey, more hoary on the quills; tail as in the male; crown of head and sides of face ashy brown, with a tinge of olive-yellow on the crown; lores ashy; eyelid white; throat and under surface of body pale olive-yellow, obscured by ashy-brown edges to the feathers; centre of the breast sulphur-yellow; sides of body and flanks pale ashy brown; lower abdomen, thighs, and under tail-coverts white, tinged with yellow,

the long ones with a mesial streak of dark brown. Total length 5·2 inches, culmen 0·5, wing 3·7, tail 2·25, tarsus 0·75.

Hab. Chili and the Western Argentine Republic to Bolivia.

a, b. Ad. sk.	Chili.	Purchased.
c, d. ♂ ♀ ad. sk.	Province of Santiago, Chili (*Landbeck*).	Salvin-Godman Coll.
e, f. ♂ ♀ ad.; *g.* ♀ imm. sk.	Santiago, Chili (*Landbeck*).	Sclater Coll.
h, i. ♀ juv. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
k. Ad. sk.	Bolivia.	Mr. Bridges [C.].

5. Pseudochloris mendozæ.

Adult male. Similar to *P. aureiventris*, but smaller, and having no bright yellow over the eye. Total length 4·6 inches, culmen 0·45, wing 3·05, tail 1·9, tarsus 0·75.

Hab. Mendoza, Argentine Republic.

a. [♂] ad. sk.	Mendoza (*Burmeister*).	Sclater Coll.
b. [♀] ad. sk.	Mendoza (*Burmeister*).	Salvin-Godman Coll.

6. Pseudochloris citrina.

? Fringilla xanthorrhoa, *Bp. Journ. Philad. Acad.* iv. p. 350 (1825); *Gray, Hand-l. B.* ii. p. 84, no. 7236 (1870).
Crithagra xanthorrhoa, *Bp. Consp.* i. p. 521 (1850).
Sycalis citrina, *Pelz. Orn. Bras.* pp. 232, 333 (1871, *ex Natterer MSS.*); *Scl. Ibis*, 1872, p. 48; *Salvin, Cat. Strickl. Coll.* p. 643 (1882); *id. Ibis*, 1885, p. 217.
Fringilla citrina, *Gray, Hand-l. B.* ii. p. 84, no. 7241 (1870).

Adult male. General colour above olive-yellowish, mottled on the mantle and back with blackish-brown centres to the feathers; rump and upper tail-coverts uniform greenish yellow; wing-coverts blackish, edged with olive-yellow, brighter on the greater series; bastard-wing, primary-coverts, and quills blackish, margined with yellow, more ashy on the inner secondaries; tail-feathers blackish, edged with olive-yellow, with a large patch of white at the end of the inner web of the outer tail-feather; on the penultimate feather a smaller white patch; crown of head uniform dull golden yellow, the nape and hind neck like the back; lores dusky, yellow above and round the eye; ear-coverts olive-yellow; cheeks and under surface of body bright yellow, the lower throat and fore neck slightly greener, as well as the sides of body and flanks; thighs and under tail-coverts yellow; under wing-coverts and axillaries olive-yellow, with dusky bases; quills below dusky, ashy along the inner edge. Total length 4·4 inches, culmen 0·35, wing 2·6, tail 1·7, tarsus 0·55.

Adult female. Different from the male, and browner, streaked with blackish centres to the head and entire upper surface, the rump rather clearer brown, washed with pale olive; wing-coverts and quills blackish brown, edged with ashy or whitish; sides of

face and ear-coverts uniform brown: under surface of body sulphur-yellow, browner on the lower throat, and chest streaked with blackish brown, the throat whiter; flanks browner, streaked with blackish.

Hab. Brazil, Guiana, and Colombia.

a. Imm. sk.	Brazil.	Purchased.
b. ♂ ad. sk.	[Brazil.]	Christiania Mus. [P.].
c. ♂ ad. sk.	Merumé Mountains, British Guiana, June 15, 1881 (*H. Whitely*).	Sclater Coll.
d, e. ♂; *f.* ♀ ad. sk.	Merumé Mountains, British Guiana, June 1881 (*H. W.*).	Salvin-Godman Coll.
g, h. ♂ ♀ ad. sk.	Roraima, Oct. & Nov. 1883 (*H. W.*).	Sclater Coll.
i, k. ♂ ♀ ad.; *l, m.* ♂ imm. sk.	Roraima, Nov. 1883 (*H. W.*).	Salvin-Godman Coll.
n. Imm. sk.	U.S. Colombia.	Salvin-Godman Coll.

7. Pseudochloris pratensis.

Orospina pratensis, *Cab. J. f. O.* 1883, p. 108, tab. i. fig. 1.

Head greenish yellow; rump yellowish green; rest of upper surface dark brown, the feathers of the back and lesser wing-coverts as well as the bastard-wing, quills, and tail-feathers edged with yellowish green. The inner web of the outer tail-feathers entirely white, the next with a longitudinal white mark. Under surface yellow, lightest on the chin, middle of the abdomen, and under tail-coverts, the sides of the body inclining to greenish. (*Cabanis.*)

Hab. Tucuman.

This species is evidently very nearly allied to *P. citrina*, and exact comparison of specimens is necessary to establish the differences between them.

87. NESOSPIZA.

Nesospiza, *Cab. J. f. O.* 1873, p. 154 ..... Type. N. acunhæ.

Foot of *Nesospiza acunhæ*.

Range. Confined to the islands of Tristan d'Acunha.

1. Nesospiza acunhæ.

Emberiza brasiliensis (*nec Gm.*), *Carmichael, Trans. Linn. Soc.* xii. p. 496 (1818).

Nesospiza acunhæ, *Cab. J. f. O.* 1873, p. 154; *Sclater, Rep. Zool. Coll. Voy. H.M.S. 'Challenger,'* ii. *Birds,* p. 112, pl. 24 (1881).

Adult. General colour above olive-yellow, streaked with black centres to the feathers, less distinct on the lower back and rump; lesser wing-coverts uniform olive-yellow; median and greater coverts, bastard-wing, primary-coverts, and quills dusky brown, edged with olive-yellow, paler at the end of the inner secondaries; tail-feathers brown, edged with olive-yellow, and much paler along the inner web; crown of head like the back, and similarly streaked; lores dusky, with a line of brighter yellow above them; eyelid yellow; ear-coverts olive-yellow, as well as the hinder cheeks, the fore part bright yellow; throat and under surface of body bright olive-yellow, a little greener on the sides of the body and flanks, the fore neck, breast, and sides of the body narrowly streaked with dusky brown; thighs and under tail-coverts clear olive-yellow; under wing-coverts and axillaries dull olive-yellow, with dusky bases; quills below brown, ashy whitish along the inner edge. Total length 7·2 inches, culmen 0·75, wing 3·75, tail 3·0, tarsus 1·7.

Hab. Islands of Tristan d'Acunha.

a, b, c. Ad. sk.	Inaccessible Island, Oct. 1873.	Voy. H.M.S. 'Challenger.'

88. PHRYGILUS.

	Type.
Phrygilus, *Cab. Arch. f. Naturg.* x. p. 289 (1844)	P. gayi.
Rhopospina, *Cab. Mus. Hein.* Th. i. p. 135 (1850) ..	P. fruticeti.
Melanodera, *Bp. Consp.* i. p. 470 (1850)	P. melanoderus.
Geospizopsis, *Bp. C. R.* xlii. p. 955 (1856)	P. unicolor.
Corydospiza, *Sundev. Av. Meth. Tent.* p. 33 (1872) ..	P. alaudinus.

Range. Throughout the Andean region of South America from Colombia to Tierra del Fuego, Patagonia, and Western Argentine Republic.

Key to the Species.

a. With yellow in the plumage.
  a'. Back olive-yellow or orange-brown. [785.
    a''. Head grey; throat grey ..... *gayi* and allies, pp. 781–
    b''. Head and throat black ..... *atriceps,* p. 786.
  b'. Back grey like the head, or brown; throat black.
    c''. Back brown, washed with olive-yellow; head grey; cheek-stripe white ..... *melanoderus,* p. 786.
    d''. Back clear grey, as also the head; cheek-stripe yellow ..... *xanthogrammus,* p. 789.
b. With no yellow in the plumage.
  c'. With the throat black.
    e''. Larger; abdomen grey; under tail-coverts white ..... *fruticeti,* p. 790.

f'. Smaller; abdomen black like the breast; under tail-coverts black with white edges ..... *carbonarius*, p. 791.
d'. With the throat grey or whitish.
g''. With no rufous on the mantle.
a'''. With the abdomen grey like the breast ..... *unicolor*, p. 792.
b'''. Abdomen white; flanks ashy.
a^4. Bill yellow; a white patch on the inner webs of the tail-feathers; throat slaty grey ..... *alaudinus*, p. 793.
b^4. No white on the tail; throat whitish or pale ashy.
a^5. No white supraloral mark; throat, centre of breast, abdomen, and thighs ashy brown; the throat a little greyer..... *plebeius*, p. 795.
b^5. A white supraloral spot; throat, centre of breast, abdomen, and thighs pure white ..... *ocularis*, p. 796.
h''. Mantle, upper back, and scapulars rufous *erythronotus*, p 796.

1. Phrygilus gayi *.

Fringilla gayi, *Eydoux & Gervais, Mag. de Zool.* 1834, Cl. ii. *Ares*, pl. 23.
Fringilla formosa, *Gould in Darwin's Voy. 'Beagle,' Birds*, iii. p. 93 (1841).
Chlorospiza gayi, *Gay, Faun. Chilen.* i. p. 355 (1847).
Euspiza gayi, *Gray, Gen. B.* iii. *App.* p. 30c (1849).

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* Mr. Ridgway has recently proposed that the name of *P. formosus* of Gould should be restricted to the small form which Dr. Sclater, after careful comparison of the typical specimens in the Paris Museum, decided to be the true *P. gayi* of Eydoux and Gervais. Both the description and figure given by the latter authors are poor, and the absence of any note as to the different colour of the rump from the rest of the back would seem to denote that the bird figured by Eydoux and Gervais was the species which we call in England *P. aldunatii*. But, then, how could the belly be called *yellow* in the latter bird, when it is conspicuously *white* in reality? We have, moreover, in the Museum specimens of *P. gayi* which precisely agree with the description and figure given by Eydoux and Gervais. It is to be regretted that Mr. Ridgway did not examine the material in the British and Paris Museums before publishing his paper on these yellow *Phrygili*. He seems to be entirely ignorant of the existence of *P. caniceps* of Burmeister; and as the late Henry Durnford speaks of this species as migratory in Patagonia, it is quite possible that *P. aldunatii* may be only a seasonal plumage of *P. caniceps*. Of the changes of plumage in these Buntings we as yet know nothing for certain, and a complete connection appears to exist between *P. aldunatii* and *P. atriceps*. Mr. Ridgway will doubtless ultimately treat of these species or races, after the fashion of American ornithologists, by means of trinomials, when he has seen the series in this Museum, and they will appear somewhat as follows:—

1. Phrygilus gayi (*Eyd. & Gervais*).
2. Phrygilus aldunatii (*Gay*).
3. Phrygilus aldunatii caniceps (*Burm.*).
4. Phrygilus aldunatii punensis (*Ridgw.*).
5. Phrygilus aldunatii saturatus (*Sharpe*).
6. Phrygilus aldunatii atriceps (*Lafr.*).

Phrygilus formosus, *Bp. Consp.* i. p. 477 (1850); *Ridgw. Proc. U.S. Nat. Mus.* x. p. 432 (1887).

Phrygilus gayi, *Bp. Consp.* i. p. 477 (1850); *Cab. Mus. Hein.* Th. i. p. 134 (1850); *Scl. Cat. Amer. B.* p. 110 (1862); *Scl. & Salv. Ibis*, 1869, p. 285; *Gray, Hand-l. B.* ii. p. 89, no. 7310 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1872); *Sharpe, P. Z. S.* 1881, p. 7; *Scl. Rep. Voy. H.M.S. 'Challenger,'* ii. *Birds*, p. 100 (1881); *Salv. Cat. Strickl. Coll.* p. 227 (1882).

Adult male. General colour above orange-brown on the mantle and upper back; the lower back and rump clear yellow; scapulars rather yellower but washed with orange-brown, and greenish externally; lesser wing-coverts slaty grey washed with olive-green; median and greater coverts clear slaty grey; bastard-wing, primary-coverts, quills, and tail-feathers blackish, externally slaty grey, more hoary on the primaries; upper tail-coverts slaty grey; crown of head clear slaty grey; the hind neck and sides of neck olive-greenish, slightly separating the crown from the mantle; lores and a narrow line across the base of the forehead, as well as the feathers round the eye, slaty blackish; ear-coverts, cheeks, and throat lighter and more pearly grey; fore neck and rest of under surface of body bright yellow, with a slight tinge of olive-green below the throat; lower breast and abdomen slightly paler yellow; thighs slaty grey; under tail-coverts white, the longer ones slaty grey with broad white edgings; under wing-coverts white with ashy bases; axillaries pale lemon-yellow, ashy at the base; quills below dusky, ashy whitish along the inner edge. Total length 5·9 inches, culmen 0·55, wing 3·35, tail 2·5, tarsus 0·8.

Adult female. Differs from the male in being paler in colour, especially underneath, the throat being light pearly grey and the breast pale yellow, with ashy-brown flanks. Total length 5·2 inches, wing 3, tail 2·05, tarsus 0·85.

Young. Similar to the adult female, but more dingy, with the head washed with yellowish green like the back. The yellow colour rather brighter on the under surface of the body, with dusky streaks on the breast and flanks; the throat also yellow.

Hab. Patagonia and Chili.

a. [♂] ad. sk.	[Chili.]	Sclater Coll.
b. [♂] ad. sk.	Chili.	Old Coll.
c. [♂] ad. sk.	Chili.	Sclater Coll.
d, *e*. ♀ ad. et juv. sk.	Porto Bueno, Jan. 9, 1876.	Voy. H.M.S. 'Challenger.'
f. [♂] ad. sk.	Tierra del Fuego (*C. Darwin*).	Voy. H.M.S. 'Beagle. (Type of *F. formosa*, Gould.)
g. Ad.; *h*. Juv. sk.	Tierra del Fuego (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
i. [♀] ad. sk.	Tierra del Fuego.	Purchased.
k. [♀] ad. sk.	Straits of Magellan.	Capt. King [P.].
l. ♂ ad. sk.	Tom Bay, Straits of Magellan, Jan. 18, 1879 (*Dr. Coppinger*).	Voy. H.M.S. 'Alert.
m, *n*, *o*. ♂ ad. sk.	Hermit Island.	Antarctic Expedition.

2. Phrygilus aldunatii.

Chlorospiza aldunatei, *Gay, Faun. Chilen.* i. p. 356 (1847).
Phrygilus gayi (*nec Eyd. & Gerv.*); *Burm. La-Plata Reis.* ii. p. 487 (1861); *Scl. & Salv. Ibis*, 1868, p. 186, 1869, p. 285; *Salvin, P. Z. S.* 1883, p. 421; *Ridgw. Proc. U.S. Nat. Mus.* x. p. 431 (1887).
Phrygilus aldunatii, *Scl. Ibis*, 1869, p. 285; *Gray, Hand-l. B.* ii. p. 89, no. 7311 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873).

Adult male. General colour above olive-yellow, from the nape to the rump; upper tail-coverts pale pearly grey; outer scapulars pearly grey, washed with olive-yellow; wing-coverts pearly grey, with a little yellow on the lesser series; bastard-wing, primary-coverts, and quills blackish, externally pearly grey, broader on the inner secondaries; tail-feathers blackish, rather more broadly edged with pearly grey; crown of head, sides of face, ear-coverts, cheeks, and throat pearly grey, darker on the ear-coverts and blackish on the lores; sides of neck and under surface of the body from the fore neck downwards olive-yellow; abdomen white; sides of body olive-yellow, the lower flanks and thighs pale ashy grey; vent and under tail-coverts white; under wing-coverts and axillaries dull white with ashy bases; quills below dusky brown, white along the inner edge. Total length 6·3 inches, culmen 0·6, wing 3·75, tail 2·7, tarsus 0·8.

Adult female. Differs from the male in having all the colours duller and browner, the grey of the head and throat being dusky ash-brown, with a faint whitish eyebrow; fore part of cheeks also whitish as well as the feathers below the eye; a dusky blackish streak along the malar line; ear-coverts dull brown; throat ashy whitish, mottled with dusky; fore neck and chest pale orange overshaded with pale tawny brown; the sides of the body and flanks deep isabelline, the abdomen a little paler. Total length 5·4 inches, culmen 0·55, wing 3·45, tail 2·05, tarsus 0·85.

Young female. Different from the adult, and more uniform dull olive-yellow above, with dusky streaks, the upper tail-coverts grey; head grey, streaked with dusky blackish on the crown; wing externally duller ashy than in the male, with paler margins to the coverts; sides of face dull ashy, with a whitish supraloral streak and a slight whitish line above the ear-coverts; cheeks also ashy whitish anteriorly; throat pale ashy, washed with hoary whitish, and separated from the cheeks by a malar line of blackish; breast yellow; the abdomen isabelline with a brownish tinge on the lower flanks and thighs; under tail-coverts dull white. Total length 5·8 inches, culmen 0·55, wing 3·4, tail 2·35, tarsus 0·85.

P. aldunatii differs from *P. gayi* principally in its uniform upper surface, the rump being coloured exactly like the back. There is no certainty as to the correct determination of the sexes as described above, as none of the specimens are authentically sexed. The grey of the head and throat in the male is decidedly darker grey than in *P. gayi*, and is of the same tint as the head; the whole of the abdomen entirely white.

Hab. Western Argentine Republic and Chili and Patagonia.

a. [♀] ad. sk.	Chili.	Old Coll.
b. ♂ ad.; *c*. Juv. sk.	Chili (*E. C. Reed*).	Salvin-Godman Coll.
d, *e*. Juv. sk.	Chili.	Sclater Coll.
f. [♂] ad. sk.	Coquimbo, Chili, Nov. 1881 (*A. H. Markham*).	Salvin-Godman Coll.
g. Juv. sk.	Santiago, Chili (*E. C. Reed*).	Sclater Coll.
h. ♀ ad. sk.	Santa Cruz, Patagonia, Jan. 4, 1839 (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
i. Ad. sk.	Patagonia (*Dr. Cunningham*).	Sclater Coll.
k. ♂ ad. sk.	Catamarca, Argentine Republic, Sept. 14, 1880 (*E. W. White*).	Sclater Coll.

Subsp. *a*. Phrygilus caniceps.

Phrygilus caniceps, *Burm. J. f. O.* 1861, p. 158; *id. La-Plata Reis.* ii. p. 487 (1861); *Gray, Hand-l. B.* ii. p. 89, no. 7317; *Durnf. Ibis*, 1878, p. 593.
Phrygilus gayi (*nec Eydoux & Gerv.*), *White, P. Z. S.* 1882, p. 599.

Adult male. Similar to *P. gayi*, but rather larger, and distinguished by the lower back and rump being of the same colour as the back, olive-yellow strongly washed with rich orange; the sides of the face and throat are of the same dark slate-colour as the crown; the under surface is brilliant orange, the whole of the lower abdomen conspicuously white, with a tinge of ashy isabelline on the lower flanks and sides of the vent; under tail-coverts entirely white: "upper mandible dark horn-colour, under mandible pale horn-colour, the tip rather darker; legs rufous brown, feet and claws black, the under surface lighter; iris light rufous" (*H. Durnford*). Total length 6·4 inches, culmen 0·6, wing 3·65, tail 2·5, tarsus 0·85.

Adult female. Similar to the male, but slightly larger and perhaps a little more yellow underneath: "beak, legs, and feet horn-colour with a touch of lavender, the upper mandible darkest; iris wood-brown" (*H. Durnford*). Total length 6·2 inches, culmen 0·55, wing 3·45, tail 2·4, tarsus 0·85.

P. caniceps is in all probability only a seasonal stage of *P. aldunatii*, and is probably the same species in summer plumage. Like *P. aldunatii*, it has the rump exactly like the back, and both the latter and the breast are very richly coloured and of a brilliant orange. In *P. caniceps* only the lower abdomen is whitish, with a shade of isabelline brown on the lower flanks.

Hab. Argentine Republic to Patagonia.

a. ♂ imm. sk.	Fuerte de Andalgala, Catamarca, Argentine Republic, Oct. 1, 1880 (*E. W. White*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Fuerte de Andalgala, Sept. 16, 1880 (*E. W. White*).	Sclater Coll.
c. ♂ imm. sk.	Chuput, Patagonia, March 23, 1878 (*H. Durnford*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Chuput, Sept. 5, 1877 (*H. Durnford*).	Salvin-Godman Coll.

Subsp. β. Phrygilus punensis.

Phrygilus gayi (*nec Eyd. & Gervais*), *Tschudi, Faun. Peruan.* p. 218 (1845); *Tacz. P. Z. S.* 1874, p. 520, 1880, p. 199; *Scl. P. Z. S.* 1881, p. 486; *Tacz. Orn. Pérou*, iii. p. 32 (1886).

Adult male. Similar to *P. caniceps*, but with a certain resemblance to the true *P. gayi*, in that the rump is slightly paler and clearer yellow than the back, but the latter scarcely approaches the orange-brown of *P. gayi*, but is on the contrary rich olive-yellow, with which the rump scarcely contrasts. The grey of the head and throat is darker in *P. punensis* than in *P. gayi*, and it has the tinge of isabelline, which is also seen on the ventral region of *P. caniceps*. It resembles *P. gayi* in the under tail-coverts being slaty grey, edged with white. Total length 6·7 inches, culmen 0·7, wing 4, tail 2·75, tarsus 1.

Another bird from Tinta, presumably a male, is very much paler everywhere than the one described (also from Tinta), while another from the vicinity of Lima is scarcely to be told from *P. alduuatii*.

Hab. Peru.

a. ♂ ad. sk.	Andes of Lima, Peru (*Prof. Nation*).	Sclater Coll.
b. Ad. sk.	Tinta, June 10, 1869 (*H. Whitely*).	Salvin-Godmau Coll.
c. ♂ ad. sk.	Tinta, Feb. 6, 1869 (*H. Whitely*).	Salvin-Godman Coll.

Subsp. γ. Phrygilus saturatus.

Emberiza gayi (*nec Eyd. & Gerv.*), *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 75.

Phrygilus atriceps (*nec D'Orb.*), *Scl. & Salv. P. Z. S.* 1867, p. 985; *Tacz. Orn. Pérou*, iii. p. 34 (1886).

Phrygilus caniceps (*nec Burm.*), *Salvin, Cat. Strickl. Coll.* p. 227 (1882).

Adult male. Similar to *P. punensis*, but with a much darker slaty-grey head, orange-brown back (approaching that of *P. atriceps*), the rump brighter yellow, in evident contrast to the mantle and back. Total length 6 inches, culmen 0·65, wing 3·75, tail 2·7, tarsus 1.

This is a form of *P. punensis*, intermediate between that race and *P. atriceps*, to which it shows such close affinities that it is probable that a complete link will be found to connect *P. punensis* and *P. atriceps*. A bird marked "female" by Mr. Whitely, from Chiuata, Peru, is very nearly as black on the head as Bolivian specimens of true *P. atriceps*.

Hab. Bolivia and Western Peru.

a. Ad. sk.	Tilotilo, Bolivia (*C. Buckley*).	Salvin-Godman Coll. (Type of *P. saturatus*.)
b. Ad. sk.	Bolivia.	Mr. Bridges [C.].

c. Ad. sk.	Bolivia (*D. Forbes*).	Sclater Coll.
d. Ad. sk.	Chiuata, Western Peru, July 19, 1867 (*H. Whitely*).	Sclater Coll.

3. Phrygilus atriceps.

Emberiza atriceps, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 76; *D'Orb. Voy. Amér. Mérid., Ois.* p. 363, pl. 47. fig. 2 (1839).
Euspiza atriceps, *Gray, Gen. B.* ii. p. 376 (1844).
Phrygilus atriceps, *Cab. Arch. f. Naturg.* x. p. 290 (1844); *Bp. Consp.* i. p. 477 (1850); *Scl. Cat. Amer. B.* p. 110 (1862); *Gray, Hand-l. B.* ii. p. 89, no. 7312 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Ridgw. Proc. U.S. Nat. Mus.* x. p. 435 (1887).

Adult. General colour above orange-brown, the lower back and rump yellow; scapulars like the back; lesser wing-coverts dark slaty grey; median and greater coverts, bastard-wing, primary-coverts, and quills black, edged with slaty grey, whitish at the ends of the greater series; upper tail-coverts black, the long ones edged with slaty grey; tail-feathers black, with ashy margins; crown of head and nape black, as also the lores, sides of face, ear-coverts, cheeks, and throat; sides of neck and under surface of body deep orange-yellow, the centre of the breast and abdomen bright yellow, whiter on the vent; thighs dark slaty grey, with ashy margins; under tail-coverts black, broadly tipped with white; under wing-coverts white, with slaty-grey edges; axillaries bright yellow; quills below dusky brown, fringed with ashy whitish along the inner edge: "bill slate-colour; feet and legs black; iris light brown" (*H. Rowland, MSS.*). Total length 5·5 inches, culmen 0·6, wing 3·6, tail 2·5, tarsus 0·9.

Adult female. Olive-brown, a little more olive on the lower back and rump; wings and tail-feathers brown with ashy margins; head brown, with dusky centres to the feathers; over the eye an ashy-brown shade; sides of face and throat isabelline-brown; the latter mottled with black centres to the feathers; breast dull orange-yellow, a little paler on the lower breast; the abdomen and under tail-coverts white, the latter with dusky centres. Total length 6·5 inches, culmen 0·6, wing 3·65, tail 2·4, tarsus 1·05.

Hab. Bolivia and Peru.

a. ♂ ad. sk.	Iquique, Peru (*H. Rowland*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Tarapacà, Bolivia (*Raymer*).	Sclater Coll.
c. ♂; *d, e.* ♀ ad. sk.	Bolivia (*W. Bridges*).	Sclater Coll.
f. ♂ ad. sk.	Bolivia.	W. Bridges [C.].

4. Phrygilus melanoderus.

Emberiza melanodera, *Quoy & Gaim. Voy.* '*Uranie*,' *Zool.* i. p. 109 (1824); *Gray, Gen. B.* ii. p. 377 (1844).
Chlorospiza melanodera, *Darwin, Voy.* '*Beagle*,' *Birds*, p. 95, pl. 32 (1841); *Gay, Faun. Chile, Zool.* i. p. 354 (1847).

Melanodera typica, *Bp. Consp.* i. p. 470 (1850); *Gould, P. Z. S.* 1859, p. 95.

Phrygilus melanoderus, *Scl. P. Z. S.* 1860, p. 385; *Abbott, Ibis*, 1861, p. 153; *Scl. Cat. Amer. B.* p. 111 (1862); *id. & Salv. Ibis*, 1868, p. 186; *Gray, Hand-l. B.* ii. p. 90, no. 7320 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Scl. Rep. Voy. 'Challenger,'* ii. *Birds*, p. 100 (1881).

Adult male. General colour above yellowish green, a little lighter on the lower back, rump, and upper tail-coverts; wing-coverts brighter olive-yellow, with grey tips to the median and greater coverts; bastard-wing and primary-coverts dusky brown, edged with grey; quills dusky brown, edged with olive-yellow, brighter on the primaries; centre tail-feathers yellowish green, the remainder dusky brown, edged with yellowish green; the outer feathers yellow, with a dusky mark at the end of the outer web, the penultimate feather with a long dusky mark along the end of the inner web, much increasing in extent on the next feather, where the yellow is confined to the outer web and a small portion of the inner one; crown of head and hind neck ashy grey; lores black, surmounted by a short white eyebrow; eyelid black, with a streak of white below joined to the cheeks; ear-coverts dark ashy grey; cheeks white, extending backwards on to the sides of the neck; throat black, followed by a pale yellow collar; sides of neck pale ashy grey; under surface of body from the fore neck downwards dull yellow; sides of breast dark ashy grey; lower abdomen ashy whitish; sides of body grey, the flanks with a few indistinct dusky stripes; thighs ashy white; under tail-coverts pale yellowish; under wing-coverts and axillaries yellow, like the breast; quills below dusky, yellow along the inner web. Total length 6 inches, culmen 0·5, wing 3·55, tail 2·4, tarsus 0·85.

The *winter plumage of the adult male* only differs from the summer plumage in having the whole of the feathering obscured by ashy or ashy brown; the back is ashy brown, strongly mottled with black centres to the feathers; the greater coverts and inner secondaries tipped with whitish grey on the outer web; the black throat obscured by ashy tips to the feathers; and the yellow of the under surface obscured by grey margins to the feathers.

The trace of winter plumage occasionally seen on summer specimens seems to indicate that the full plumage is assumed by the abrasion or wearing off of the tips to the feathers, instead of by a direct moult.

Adult female. Different from the male. General colour above brown, rather more reddish on the lower back and rump, strongly mottled with black centres to the feathers; scapulars like the back; lesser wing-coverts olive-yellow; median and greater coverts dusky brown, externally washed with yellowish olive, the latter with brown, both series being tipped with white; bastard-wing dark brown, narrowly edged with whitish; primary-coverts and quills brown, edged with olive-yellow, brighter on the primaries, the secondaries margined with brown, whitish towards their ends;

upper tail-coverts lighter brown, with dark brown centres; tail-feathers dark brown, edged with whity brown, the outer ones with yellow; the outermost feather entirely pale yellow, with brown shaft widening at the tip, and a long brown mark along the inner web; head like the back, but a little more reddish brown; lores whitish; ear-coverts and cheeks dark brown, with narrow dusky shaft-lines; throat dull white; sides of neck light brown, streaked with black; remainder of under surface of body pale yellow, streaked with grey; breast brown, tinged with yellow and streaked with black; abdomen and under tail-coverts dull white, the latter with brown shaft-streaks; sides of body and flanks whity brown, broadly streaked with black and tinged with rufous-brown; thighs whity brown; under wing-coverts and axillaries yellow; quills below ashy, whitish along the inner web. Total length 6 inches, culmen 0·55, wing 3·55, tail 2·35, tarsus 0·85.

The *adult female in winter plumage* appears to differ from the summer plumage in being everywhere lighter and in having pale sandy-buff edges to the feathers of the back, and white margins to the inner secondaries: a light eyebrow of whity brown streaked with dark brown is more or less conspicuous; the under surface is similar at both seasons of the year, but the streaks are not so broadly developed in winter.

The young bird in winter appears to resemble the adult female, but is more uniformly reddish brown above and below, with an absence of yellow on the under surface of the body.

It is very difficult to determine the changes of plumage in this species, as none of the specimens in the Museum have authentic dates attached, or the sexes properly determined by dissection.

Hab. Falkland Islands; Patagonia.

a, b. ♂; *c.* ♀ ad. sk.	Falkland Islands (*Leconte*).	Sclater Coll.
d. ♀ ad. sk.	Falkland Islands.	Sclater Coll.
e, f. ♂ ♀ ad. sk.	Falkland Islands.	Salvin-Godman Coll.
g, h. ♂ ♀ ad. sk.	Falkland Islands.	Tweeddale Coll.
i. ♂ ad.; *k.* ♀ imm. sk.	Falkland Islands.	Admiral Fitzroy [P.].
l, m. ♂ ad.; *n.* ♀ ad. sk.	Falkland Islands.	Antarctic Expedition.
o. Imm. sk.	Falkland Islands.	Zoological Society.
p. ♂ imm. sk.	Falkland Islands.	Voy. H.M.S. 'Rattlesnake.'
q. ♀ ad. sk.	Port Louis, Falkland Islands.	Antarctic Expedition.
r, s. ♂ ♀ ad. sk.	Berkeley Sound, East Falklands.	Antarctic Expedition.
t. ♂ ad. sk.	Falkland Islands.	Voy. H.M.S. 'Challenger.'
u, v. ♂ ad. sk.	Straits of Magellan.	Capt. King [C.].
w, x. ♂ ♀ ad. sk.	Santa Cruz, Patagonia (*C. Darwin*).	Salvin-Godman Coll.

5. Phrygilus xanthogrammus.

Chlorospiza xanthogramma, *Gray in Darwin's Voy.* '*Beagle*,' *Birds*, p. 196, pl. 23 (1841); *Gay, Faun. Chile, Zool.* i. p. 354 (1847).
Emberiza xanthogramma, *Gray, Gen. B.* ii. p. 377 (1844).
Melanodera xanthogramma, *Bp. Consp.* i. p. 470 (1850); *Gould, P. Z. S.* 1859, p. 95.
Phrygilus xanthogrammus, *Scl. P. Z. S.* 1860, p. 385; *id. & Salv. Ibis*, 1868, pp. 185, 186; *Gray, Hand-l. B.* ii. p. 90, no. 7321 (1870); *Salv. Cat. Strickl. Coll.* p. 228 (1882).

Adult. General colour above bluish grey, with a slight tinge of yellow here and there on the head and back; lesser wing-coverts olive-yellow; median and greater coverts, bastard-wing, and primary-coverts olive-yellow edged with grey; quills dusky brown, externally olive-yellow, the inner secondaries edged with grey; the primaries hoary towards the end; upper tail-coverts grey, like the back; tail-feathers dusky brown edged with grey; the outer feathers for the most part white, yellow externally, with a mark of dark brown along the end of the outer web, increasing in extent towards the centre of the tail, and occupying the greater part of the inner web as well; crown of head like the back, with a line of bright yellow along the base of the forehead, extending backwards and forming an eyebrow; lores black; eyelid yellow; ear-coverts bluish grey washed with olive-yellow, especially below the eye; cheeks yellow, forming a moustachial streak, which becomes paler posteriorly and joins a collar of pale yellow below the throat, which is black; sides of neck bluish grey; fore neck, breast, and sides of body bluish grey, mixed with olive-yellow; abdomen white, as also the under tail-coverts; thighs bluish grey; under wing-coverts and axillaries pale yellow; quills below dusky; inner edge of quills ashy or yellowish ashy. Total length 7 inches, culmen 0·45, wing 4, tail 2·7, tarsus 0·8.

The specimen described has a slight tinge of yellow here and there on the upper surface. This is more distinctly shown on another specimen from Hermit Island, and a third, from the same locality, has the whole of the upper surface of the body olive-yellowish, including the wings and the sides of face, sides of neck, and breast; in fact it is yellowish where the other bird is grey. The eyebrow, cheeks, abdomen, and under tail-coverts are brighter yellow.

This yellow-bellied bird has the appearance of being very distinct from *P. melanoderus*, and if it were peculiar to Hermit Island it would be a very recognizables pecies. Two specimens, however, are in the Museum from the Falklands; and one of them in the Sclater Collection is apparently a hybrid between *P. melanoderus* and *P. xanthogramma*. It is evident, therefore, that a much larger amount of material must be collected and examined before a proper understanding of these two species can be arrived at.

Hab. Falkland Islands; Patagonia and Chili.

a. Ad. sk.	Falkland Islands.	Antarctic Expedition.
b. ♂ imm. sk.	Falkland Islands.	J. Macgillivray, Esq. [P.].
c. ♂ ad. sk.	Hermit Island.	Antarctic Expedition. (Type of species.)
d. ♂ ad. sk.	S. Martin's Cove, Hermit Island.	Antarctic Expedition.
e. Juv. sk.	Tierra del Fuego (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
f. Ad. sk.	Chili.	T. Edmunds [C.].

6. Phrygilus fruticeti.

Fringilla fruticeti, *Kittl. Kupf. Vög.* p. 18, pl. 23. fig. 1 (1832).
Fringilla erythrorhyncha, *Less. L'Inst.* ii. p. 316 (1834).
Emberiza luctuosa, *Eydoux & Gerv. Mag. de Zool.* 1836, *Aves*, p. 24, pl. 71.
Phrygilus fruticeti, *Darwin, Voy. 'Beagle,' Birds*, p. 94 (1841); *Bp. Consp.* i. p. 476 (1850); *Burm. Th. Bras.* iii. p. 233, note (1856); *id. La-Plata Reis.* ii. p. 487 (1861); *Scl. Cat. Amer. B.* p. 111 (1862); *id. & Salv. P. Z. S.* 1867, p. 985, 1869, p. 152; *Gray, Hand-l. B.* ii. p. 89, no. 7319 (1870); *Sel. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Durnf. Ibis*, 1878, p. 393; *Sharpe, P. Z. S.* 1881, p. 7; *Scl. t. c.* p. 486; *Salv. Cat. Strickl. Coll.* p. 228 (1882); *Tacz. Orn. Pérou*, iii. p. 37 (1886); *Scl. P. Z. S.* 1886, p. 397.
Euspiza fruticeti, *Gray, Gen. B.* ii. p. 376 (1844).
Chlorospiza erythrorhynca, *Gay, Hist. Chile, Zool.* i. p. 358 (1847).
Rhopospina fruticeti, *Cab. Mus. Hein.* Th. i. p. 135 (1850).

Adult male. General colour above slaty grey, the mantle and upper back streaked with black; the lower back and rump uniform; lesser wing-coverts ashy grey; median coverts black, with a large white spot at the end of the outer web; greater coverts black, edged with ashy, with a smaller white spot at the end of the outer web; bastard-wing black, fringed with white near the end; primary-coverts and quills black, edged with ashy grey, more hoary on the primaries; upper tail-coverts ashy like the back, with lighter grey edges; tail-feathers black, edged with ashy grey, the outer ones narrowly fringed with white at the ends; crown of head slaty grey, the feathers rather broadly centred with black; the hind neck more minutely spotted; lores and feathers round eye black; eyelid white above and below; ear-coverts ashy grey, as also the cheeks, sides of neck, and under surface of the body; fore part of cheeks, throat, and fore neck black, the chest also slightly mottled with black; lower breast and abdomen white; sides of body and flanks slaty grey washed with brown; thighs slaty grey; under tail-coverts white; under wing-coverts and axillaries pale slaty grey; quills below dusky, ashy along the inner edge: "bill flesh-colour with a tinge of yellow; legs darker flesh-colour, toes light brown; iris wood-brown" (*H. Durnford*). Total length 6·5 inches, culmen 0·55, wing 3·8, tail 2·9, tarsus 0·85.

In *seasonal plumage* all the feathers of the upper surface are obscured by brown edges, and the black of the throat by ashy-grey margins; lores, eyelid, and a narrow line along the cheeks white; the grey margins on the wings and tail broader and more conspicuous, and the latter distinctly edged with ashy round the tips.

Hab. Andes of Chili and Patagonia, extending to Peru and Bolivia.

a. ♀ ad. st.	Chili.	Mr. Bridges [C.].
b. Pull. sk.	Chili (*Leybold*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Chili.	Sclater Coll.
d. Ad. sk.	Chili (*E. C. Reed*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Coquimbo, Chili, Aug. 25, 1879 (*Dr. Coppinger*).	Voy. H.M.S. 'Alert.'
f. Imm. sk.	Coquimbo, June (*Dr. Coppinger*).	Voy. H.M.S. 'Alert.'
g. ♀ ad. st.	Coquimbo (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
h, i. ♀ ad. sk.	Rio Negro (*W. H. Hudson*).	Sclater Coll.
k. ♂ ad. sk.	Chuput, Patagonia, Sept. 20, 1877.	H. Durnford, Esq. [C.].
l. Juv. sk.	Santa Cruz, Patagonia (*C. Darwin*).	Voy. H.M.S. 'Beagle.'
m. ♂ ad. sk.	Andes of Lima, Peru (*W. Nation*).	Sclater Coll.
n. Ad. sk.	Arequipa, Peru, May 30 (*H. Whitely*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Arequipa, Peru, March 25, 1868 (*H. Whitely*).	Sclater Coll.
p. ♂ ad. sk.	Chiuata, S.W. Peru, July 19, 1867 (*H. W.*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Iquique, Peru (*H. Rowlands*).	Salvin-Godman Coll.
r. Imm. sk.	Tilotilo, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

7. Phrygilus carbonarius.

Emberiza carbonaria, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 79; *D'Orb. Voy. Amér. Mérid., Ois.* p. 561, pl. xv. fig. 2 (1835–44).
? Fringilla carbonaria, *Darwin, Voy. 'Beagle,' Birds*, p. 94 (1841).
Euspiza carbonaria, *Gray, Gen. B.* ii. p. 376 (1844).
Phrygilus carbonarius, *Bp. Consp.* i. p. 476 (1850); *Burm. Th. Bras.* iii. p. 233, note (1856); *id. La-Plata Reis.* ii. p. 487 (1861).

Adult male. General colour above ashy grey, with blackish centres to the feathers of the mantle and back, where the plumage is more or less edged with brown; rump nearly uniform brown; lesser wing-coverts slaty grey; median and greater coverts black, rather broadly edged with slaty grey, whiter on the border of the median series; bastard-wing, primary-coverts, and quills also black or blackish brown, edged with slaty grey or lighter brown, the margins of the primaries more hoary; upper tail-coverts slaty grey, with blackish-brown centres; tail-feathers black, with pale brown margins to the centre ones, the outermost with a fringe of white on the outer web; crown of head like the back, and similarly streaked; lores black, as also the extreme base of the forehead; feathers round eye and sides of face black; ear-coverts slaty grey, black anteriorly; cheeks, throat, and under surface of body black, from the chin to the vent; sides of body and flanks ashy grey, washed with brown and streaked with black; thighs slaty grey; under tail-coverts white with black bases; under wing-coverts and axillaries black, slightly edged with slaty grey; quills below blackish brown, ashy along the inner edge. Total length 5·5 inches, culmen 0·45, wing 2·9, tail 2·4, tarsus 0·75.

Hab. Western Argentine Republic to Bolivia.

a. ♂ ad. sk.	Sierra de Mendoza, Jan. 1858 (*Dr. Burmeister*).	Salvin-Godman Coll.

8. Phrygilus unicolor.

Emberiza unicolor, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 79.
Phrygilus unicolor, *Cab. Arch. f. Naturg.* x. p. 290 (1844); *Jard. Contr. Orn.* 1849, p. 44, pl. 20; *Bp. Consp.* i. p. 376 (1850); *Tschudi & Cab. Faun. Peruan.* p. 219 (1855); *Scl. P. Z. S.* 1860, p. 76; *id. Cat. Amer. B.* p. 110 (1862); *id. & Salv. P. Z. S.* 1870, p. 785; *Wyatt, Ibis*, 1871, p. 128; *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Salv. & Godm. Ibis*, 1880, p. 122; *Salv. Cat. Strickl. Coll.* p. 228 (1882); *Berl. & Tacz. P. Z. S.* 1885, p. 85; *Salv. P. Z. S.* 1886, p. 397.
Phrygilus rusticus, *Cab. Arch. f. Naturg.* x. p. 290 (1844); *Burm. Th. Bras.* iii. p. 233 (1856); *Gray, Hand-l. B.* ii. p. 89, no. 7315 (1870); *Tacz. Orn. Pérou*, iii. p. 38 (1886).
Euspiza unicolor, *Gray, Gen. B.* iii. App. p. 17 (1844).
Euspiza rustica, *Gray, t. c.* p. 17 (1844).
Passerculus geospizopsis, *Bp. C. R.* xxxvii. p. 921 (1853); *Scl. P. Z. S.* 1856, p. 306.
Phrygilus geospizopsis, *Scl. P. Z. S.* 1855, p. 160; *id. Cat. Amer. B.* p. 110 (1862).
Chlorospiza plumbea, *Philippi & Landb. Arch. f. Naturg.* 1864, p. 47.

Adult male. General colour above uniform slaty grey; lesser wing-coverts like the back; median and greater coverts, bastard-wing, primary-coverts, and quills blackish, edged with ashy grey, lighter and more hoary on the primaries; tail-feathers black, edged with ashy grey; sides of face and under surface uniform slaty grey, rather paler than the back; under wing-coverts and axillaries like the breast; quills blackish below, ashy along the inner edge: "bill nearly black; legs light brown; feet dark brown; iris hazel" (*L. Fraser*). Total length 5·7 inches, culmen 0·5, wing 3·6, tail 2·4, tarsus 0·9.

Adult female. Different from the male. General colour above brown, broadly streaked with black down the centre of the feathers, the rump and upper tail-coverts ashy grey, the latter with dusky centres to the feathers; lesser wing-coverts ashy grey; median and greater coverts black, edged with ashy grey, whitish towards the ends, browner on the inner greater coverts, which are like the inner secondaries; bastard-wing, primary-coverts, and quills black, edged with ashy or whity brown, especially the inner secondaries: tail-feathers blackish, edged with ashy grey; crown of head like the back, and streaked with black like the back; lores ashy whitish; feathers round eye white; ear-coverts and sides of face light ashy, slightly streaked with dusky, the fore part of the cheeks whitish; throat light ashy, whiter on the chin; lower throat, fore neck, and under surface of body dull ashy white, broadly streaked with blackish brown; abdomen whiter; sides of body and flanks washed with brown and broadly streaked with black; thighs white; under tail-coverts white, with dusky blackish centres: under wing-coverts and axillaries ashy grey, with lighter ashy bases; quills below dusky brown, ashy along the inner edge. Total length 6·2 inches, culmen 0·55, wing 3·7, tail 2·6, tarsus 1.

Young male. Similar to the old female, and similarly streaked above, but not so heavily streaked below. The uniform grey plumage seems to be gradually assumed, apparently by a moult and not by a change of the feather.

Specimens from the northern parts of South America seem to be decidedly smaller than those from Peru and Chili, as will be seen from the dimensions of the wing in the males from the following localities:—

Venezuela	wing	3·2	inches.
New Granada..	„	3·00–3·4	„
Ecuador	„	3·35–3·7	„
Peru	„	3·4	„
Bolivia	„	3·40–3·65	„
Chili	„	3·45–3·8	„

Hab. Andes of Chili and Bolivia to Peru, Ecuador, Colombia, and Venezuela.

a. [♂] ad. sk.	Straits of Magellan.	The Admiralty [P.].
b. [♀] ad. sk.	Chili.	Sclater Coll.
c, d. ♂ ♀ ad. sk.	Santiago, Chili (*Landbeck*).	Sclater Coll.
e, f. ♂ ad. sk.	Mendoza.	Herr Weisshaupt [C.].
g, h. ♂ ♀ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
i, k. ♂ ad. sk.	Bolivia (*Bridges*).	Sclater Coll.
l. ♂ ad. sk.	Bolivia (*D. Forbes*).	Sclater Coll.
m. ♂ ad. sk.	Junin, Peru (*Jelski*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Ninarapa, Peru (*Jelski*).	Salvin-Godman Coll.
o. ♂ ad.; *p.* [♂ juv.] sk.	Panza, Ecuador, Jan. 1859 (*L. Fraser*).	Sclater Coll.
q. ♂ ad. sk.	Ecuador.	J. Gould, Esq.
r. ♂ ad. sk.	Ecuador.	Purchased.
s. ♂ ad. sk.	Quito, Ecuador.	Salvin-Godman Coll.
t, u. ♂ ♀ ad. sk.	Sicál, Ecuador (*L. Buckley*).	Salvin-Godman Coll.
v. ♀ ad. sk.	Ecuador (*L. Fraser*).	Sclater Coll.
w. ♂ ad. sk.	Bogotá, Colombia.	Purchased.
x, y. ♂ ♀ ad. sk.	Bogotá.	Sclater Coll.
z. ♂ ad. sk.	Bogotá (*G. Crowther*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Sierra Nevada of Santa Marta (*F. Simons*).	Sclater Coll.
b', c'. ♂ ad.; *d', e'.* ♂ imm. sk.	Sierra Nevada of Santa Marta, July 1879 (*F. Simons*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Sierra Nevada of Santa Marta, Sept. 14, 1879 (*F. Simons*).	Salvin-Godman Coll.
g'. ♀ ad. sk.	New Granada.	Purchased.
h', i'. ♂ ♀ ad. sk.	Merida, Venezuela (*A. Goering*).	Purchased.

9. Phrygilus alaudinus.

Fringilla alaudina, *Kittl. Kupf. Vög.* p. 18, pl. 23. fig. 2 (1832).
Emberiza guttata, *Meyen, Nova Acta Acad. Leop.* xvi. Suppl. p. 85, pl. 12. fig. 1 (1834); *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 78.

Passerina guttata, *Eydoux & Gerv. Mag. de Zool.* 1836, p. 22, pl. 70.
Chlorospiza alaudina, *Gay, Faun. Chile, Zool.* p. 357 (1847).
Euspiza alaudina, *Gray, Gen. B.* ii. p. 376 (1844).
Phrygilus alaudinus, *Bp. Consp.* i. p. 476 (1850); *Cab. Mus. Hein.* Th. i. p. 135 (1850); *Burm. Th. Bras.* iv. p. 233. note (1856); *Scl. P. Z. S.* 1858, p. 552, 1860, p. 87; *id. Cat. Amer. B.* p. 111 (1882); *id. & Salv. P. Z. S.* 1867, p. 985, 1868, p. 568; *Gray, Hand-l. B.* ii. p. 89, no. 7313 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Salv. P. Z. S.* 1883, p. 421; *Berl. & Tacz. P. Z. S.* 1884, p. 294, 1885, p. 85; *Tacz. Orn. Pérou*, iii. p. 35 (1886).
Phrygilus guttatus, *Licht. Nomencl. Av. Berol.* p. 43 (1854).

Adult male. General colour above bluish grey, the feathers of the mantle and upper back broadly streaked with black; lower back, rump, and upper tail-coverts uniform bluish grey; lesser wing-coverts uniform bluish grey; median coverts blackish, externally grey; greater coverts blackish, edged with hoary grey, or whitish ashy; bastard-wing, primary-coverts, and quills black, edged with bluish grey, more hoary on the primaries and browner on the inner secondaries; tail-feathers blackish, all but the two centre ones with a large white band across the greater part of the inner web, the outer feathers also fringed with white at the ends; crown of head uniform bluish grey, as also the sides of the head, ear-coverts, cheeks, throat, sides of neck, and fore neck; lores, feathers below the eye, and fore part of cheeks black; breast and abdomen white; sides of body and flanks bluish grey; thighs white, ashy grey posteriorly; under tail-coverts white; under wing-coverts and axillaries bluish grey; quills below dusky, ashy along the inner edge; bill yellowish brown; legs and toes light chrome-yellow; iris dark brown. Total length 5·5 inches, culmen 0·5, wing 2·9, tail 2, tarsus 0·85.

In *seasonal plumage* the adult male is altogether browner on the upper surface, the feathers of the head and back broadly centred with blackish brown; rump and upper tail-coverts uniform bluish grey; sides of face and under surface of body as in the bird described above, but the flanks light brown, sometimes narrowly streaked with dusky brown, but more often uniform. The brown on the head rapidly disappears, but remains on the mantle for some long time; so that birds with the grey back, streaked with black only, are rare in collections.

Hab. Andes of Chili and Peru to Ecuador.

a. ♂ ad. sk.	Chili.	Lord Byron [C.].
b. ♀ ad. sk.	Chili.	Purchased.
c, d. ♂ ♀ ad. sk.	Chili.	Sclater Coll.
e. ♂ ad. sk.	Chili (*E. C. Reed*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Coquimbo, Chili, Nov. 1881 (*A. H. Markham*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Lima, Peru (*W. Nation*).	Sclater Coll.
i. ♂ ad. sk.	Islay, Peru, Sept. 25, 1867 (*H. Whitely*).	Sclater Coll.

k. ♂ ad. sk.	Islay, May 10, 1867 (*H. W.*).	Sclater Coll.
l, *m*. ♂ ad. et juv. sk.	Arequipa, Peru, July 2, 1867 (*H. W.*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Huanta, Peru (*Jelski*).	Sclater Coll.
o. ♀ ad. sk.	Riobamba, Ecuador, Dec. 1858 (*L. Fraser*).	Sclater Coll.
p. ♂ ad. sk.	Punin, Ecuador, June 1858 (*L. Fraser*).	Sclater Coll.
q, *r*. ♂ ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
s, *t*. ♂ ♀ ad. st.	Valparaiso (*C. Darwin*).	Voy. H.M.S. 'Beagle.'

10. Phrygilus plebeius.

Phrygilus plebeius, *Cab. Arch. f. Naturg.* x. p. 290 (1844); *Bp. Consp.* i. p. 476 (1850); *Tschudi & Cab. Faun. Peruan., Aves*, p. 219, pl. 19. fig. 1 (1855); *Scl. P. Z. S.* 1860, p. 87; *id. & Salv. P. Z. S.* 1868, p. 568; *Gray, Hand-l. B.* ii. p. 89, no. 7316 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Berl. & Tacz. P. Z. S.* 1884, p. 294; *Tacz. Orn. Pérou*, iii. p. 39 (1884); *Scl. P. Z. S.* 1886, p. 397.

Phrygilus ocularis (*nec Scl.*), *Tacz. P. Z. S.* 1874, p. 520, 1879, p. 229, 1882, p. 17.

Adult male. General colour above ashy brown, all the feathers broadly centred with black, producing a streaked appearance; lower back and rump more ashy grey, the black centres less distinct; lesser wing-coverts ashy grey; median coverts blackish, rather broadly edged with ashy grey; greater coverts blackish, externally brown, ashy whitish towards the ends; bastard-wing, primary-coverts, and quills blackish brown, edged with ashy grey, more hoary on the primaries; upper tail-coverts slaty grey, the long ones black with ashy edges; tail-feathers blackish brown, margined with ashy brown; crown of head and hind neck like the back, and mottled like the latter, the mesial spots being smaller; lores and a narrow eyebrow pale ashy grey, the latter decidedly lighter; eyelid white; feathers below the eye and ear-coverts ashy brown, with a hoary shade on the former; cheeks, throat, and under surface of body pale ashy grey, inclining to ashy brown on the sides of neck, fore neck, breast, and abdomen, the latter becoming whiter towards the vent; sides of body, flanks, and thighs brown; under tail-coverts white; under wing-coverts and axillaries ashy grey, with whitish edges; quills below dusky brown, ashy along the inner edge. Total length 5·4 inches, culmen 0·4, wing 3, tail 2, tarsus 0·75.

Adult female. Similar to the male, but rather more coarsely streaked with black above; the ear-coverts browner and not so ashy as in the male; under surface pale ashy, browner on the sides of the body, which are narrowly streaked with blackish brown; the fore neck and sides of upper breast distinctly streaked with blackish brown.

Young male. Greatly resembles the old female, but is more thickly streaked with blackish brown on the throat and remainder

of under surface, and has also the under tail-coverts streaked down the centre.

Hab. Western Argentine Republic to Bolivia, Peru, and Ecuador.

a. ♀ ad. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
b, c. ♂ ♀ ad. sk.	Mendoza.	Herr Weisshaupt [C.].
d. ♀ ad. sk.	Mendoza (*Weisshaupt*).	Sclater Coll.
e. ♂ ad. sk.	Mendoza (*Weisshaupt*).	Salvin-Godman Coll.
f. Ad. sk.	Bolivia.	Mr. Bridges.
g. ♂ ad. sk.	Tarapacá, Feb. 5, 1886 (*Raymer*).	Sclater Coll.
h. ♀ ad. sk.	Lima, Peru (*W. Nation*).	Sclater Coll.
i. ♂ ad. sk.	Arequipa, Peru, Feb. 27, 1868.	Henry Whitely [C.].
k, l. ♂ ♀ ad. sk.	Arequipa, Feb. 19, 1868 (*H. W.*).	Sclater Coll.
m. ♂ ad. sk.	Tinta, Peru, May 4, 1868 (*H. W.*).	Sclater Coll.
n. ♂ ad. sk.	Tinta, May 4 (*H. W.*).	Salvin-Godman Coll.

11. Phrygilus ocularis.

Phrygilus ocularis, *Scl. P. Z. S.* 1858, pp. 454, 552, pl. 45; *id. Cat. Amer. B.* p. 111 (1862); *Gray, Hand-l. B.* ii. p. 89, no. 7134 (1870); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Tacz. Orn. Pérou*, iii. p. 40 (1886).

Adult male. Similar to *P. plebeius*, but rather smaller, and with a whitish mark above the lores; the throat, centre of breast, and abdomen pure white, as well as the thighs: "bill, legs, and feet yellow; iris hazel" (*L. Fraser*). Total length 4·8 inches, culmen 0·4, wing 2·65, tail 1·9, tarsus 0·7.

I have not seen a grey-plumaged female, the birds so marked in the collection being all streaked on the under surface. In this streaked plumage there is a visibly paler appearance than in the corresponding stages of *P. plebeius*.

The white eyelid, from which the species is named, is not a distinctive character, as *P. plebeius* has it also, but the latter bird is ashy above the lores, and shows no white mark. *P. ocularis* is distinctly whiter below; but the two species are very closely allied.

Hab. Ecuador and Peru.

a. ♂ ad. sk.	Ecuador.	L. Fraser [C.].
b, c. ♂ ♀ ad. sk.	Cuenca, Ecuador (*L. Fraser*).	Sclater Coll. (Types of species.)
d, e. ♂ ♀ ad. sk.	Sical, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Ecuador.	Sclater Coll.

12. Phrygilus erythronotus.

Chlorospiza erythronota, *Philippi & Landb. Arch. f. Naturg.* 1863, p. 121.

Fringilla erythronota, *Gray, Hand-l. B.* ii. p. 84, no. 7239 (1870).

Sycalis erythronota, *Scl. Ibis*, 1872, p. 48; *Tacz. Orn. Pérou*, iii. p. 62 (1886).
Phrygilus dorsalis, *Cab. J. f. O.* 1883, p. 109.

Adult. General colour above chestnut, including the scapulars; the rump and upper tail-coverts slaty grey, slightly washed with chestnut; lesser wing-coverts slaty grey; median and greater coverts, bastard-wing, primary-coverts, and quills black, edged with slaty grey, the primaries with hoary whitish, the inner greater coverts and inner secondaries broadly edged with chestnut; tail-feathers dusky brown, edged with ashy; crown of head and hind neck slaty grey; lores ashy whitish; feathers round eye and ear-coverts ashy brown, with whitish shaft-lines; cheeks and throat whitish; fore neck and breast ashy grey; lower breast and abdomen, sides of body, flanks, and under tail-coverts isabelline or creamy white; thighs browner; under wing-coverts and axillaries ashy grey, rather hoary towards the ends; quills below dusky brown, ashy whitish along the inner edge. Total length 6·5 inches, culmen 0·6, wing 3·95, tail 2·6, tarsus 0·95.

Hab. Tucuman to Andes of Southern Peru.

a. Ad. sk.	Cerro Voyo, Tucuman (*Schulz*).	Salvin-Godman Coll.
b. Ad. sk.	Tucuman (*Schulz*).	Sclater Coll.

89. IDIOPSAR.

Type.
Idiopsar, *Cassin, Proc. Philad. Acad.* 1866, p. 414 .... I. brachyurus.

Range. Bolivia.

1. Idiopsar brachyurus.

Idiopsar brachyurus, *Cass. Proc. Philad. Acad.* 1866, p. 414; *Sclater, Ibis*, 1884, p. 240, pl. vii.
Scolecophagus brachyurus, *Gray, Hand-l. B.* ii. p. 39, no. 6543 (1870).

Entire plumage of the head and body bluish cinereous or plumbeous, darker on the upper parts, and lighter on the under-parts, nearly white at the base of the under mandible; quills dark ashy brown, primaries edged externally with light ashy, nearly white; tail-feathers dark brown, nearly black, edged with light ashy. Lower abdomen or ventral region light ashy, nearly white. Bill dark horn-colour, under mandible lighter, especially at the base. Tarsi and toes light brown. Total length about $7\frac{1}{2}$ inches, wing 4, tail $2\frac{3}{4}$, bill 1. (*Cassin.*)

Hab. La Paz, Bolivia.

90. SPODIORNIS.

Type.
Spodiornis, *Scl. P. Z. S.* 1866, p. 323..... S. jardinii.

Range. Ecuador to Peru.

1. Spodiornis jardinii.

Spodiornis jardinii, *Scl. P. Z. S.* 1866, p. 323; *id. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Berl. & Tacz. P. Z. S.* 1885, p. 84.
Conirostrum jardinii, *Gray, Hand-l. B.* i. p. 120, no. 1495 (1869).

Adult male (type of species). Uniform slaty grey above; lesser wing-coverts like the back; remainder of wing-coverts and quills and tail-feathers blackish, edged with slaty grey, more hoary on the primaries; sides of face and under surface of body uniform slaty grey, rather paler than the back, the under tail-coverts edged with white; under wing-coverts and axillaries slaty grey. Total length 4·7 inches, culmen 0·45, wing 2·85, tail 1·8, tarsus 0·7.

Adult female. Different from the male. Uniform olive-brown above; lesser wing-coverts like the back; median coverts more slaty grey; greater coverts and quills dark brown, externally more reddish brown, especially on the secondaries; bastard-wing and primary-coverts uniform dark brown; primaries and tail-feathers dark brown, with olive-brown margins; sides of face rather more ashy olive-brown; under surface of body dingy yellowish olive, more ashy on the throat; centre of breast and abdomen ashy grey; sides of body, flanks, thighs, and under tail-coverts olive-brown, the latter with yellowish-white margins: under wing-coverts and axillaries like the breast. Total length 4·8 inches, culmen 0·45, wing 2·7, tail 1·7, tarsus 0·75.

A younger bird in the Salvin-Godman Collection has the throat and fore neck spotted and streaked with dusky.

Hab. Ecuador and Colombia.

a. ♂ ad. sk.	Ecuador (*Jameson*).	Sclater Coll. (Type of species.)
b. ♀ ad. sk.	Nanegal, Ecuador (*L. Fraser*).	Sclater Coll.
c. ♀ jun. sk.	Quito, Ecuador.	Salvin-Godman Coll.
d. ♂ ad. sk.	Bogotá, U.S. Colombia.	Salvin-Godman Coll.

2. Spodiornis jelskii.

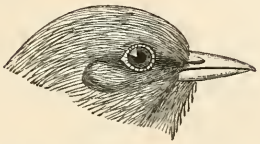
Cyanospiza sp. (?), *Tacz. P. Z. S.* 1874, p. 250.
Spodiornis jelskii, *Tacz. Orn. Pérou*, iii. p. 42 (1886).

Female. Above dusky brown with an olivaceous shade; below rufescent olive, the breast streaked with dusky; under tail-coverts ochraceous with a brownish disk; wings and tail brownish black; greater wing-coverts and quills margined with rufous-brown. (*Taczanowski.*)

Hab. Ropaybamba, Peru (*Jelski*).

91. XENOSPINGUS.

Type.
Xenospingus, *Cab. J. f. O.* 1867, p. 347 ..... X. concolor.



Head of *Xenospingus concolor*.

Range. Peru and Bolivia.

1. Xenospingus concolor.

Sylvia concolor, *D'Orb. & Lafr. Syn. Av.* p. 20 (1837); *D'Orb. Voy. Amér. Mérid., Zool.* p. 216, pl. xviii. fig. 1 (1835–44).
Trichas concolor, *Gray, Gen. B.* ii. p. 197 (1848).
Xenospingus concolor, *Cab. J. f. O.* 1867, p. 349; *Sel. & Salv. P. Z. S.* 1868, pp. 173, 569; *iid. Nomencl. Av. Neotr.* p. 30 (1873); *Tacz. Orn. Pérou*, iii. p. 26 (1886).
Phrygilus concolor, *Gray, Hand-l. B.* ii. p. 90, no. 7372 (1870).

Adult male. Uniform slaty grey above; wing-coverts like the back; bastard-wing, primary-coverts, quills, and tail-feathers dusky brown, edged with slaty grey, rather paler on the margins of the primaries; head like the back; lores blackish; upper and lower edge of eyelid white; ear-coverts, cheeks, and under surface of body light slaty grey, rather darker ashy grey on the sides of the body; under tail-coverts ashy grey, with whitish margins; under wing-coverts and axillaries like the breast, very pale ashy along the edge of the wing; quills dusky below, pale ashy along the inner edge. Total length 6·3 inches, culmen 0·55, wing 2·8, tail 2·95, tarsus 0·95.

Adult female. Similar to the male. Total length 6·2 inches, culmen 0·5, wing 2·8, tail 2·75, tarsus 0·85 *.

Young (?) *female.* Different from the male. Entirely brown above; wing-coverts and quills also brown, with paler edges to the median and greater coverts; tail-feathers brown; head brown, a little more ashy on the hind neck, sides of neck, and over the ear-coverts; eyelid whitish; ear-coverts brown; under surface of body light brown, the throat rather more ashy; centre of the breast and abdomen whity brown, the flanks darker brown; the fore neck, breast, and sides of body indistinctly streaked with dusky brown;

* Mr. Henry Whitely has marked a grey bird as the *adult female*; but I suspect that there is a mistake here, and that the bird I have described as the *young* is in reality the old female.

thighs brown; under tail-coverts white, with brown centres; under wing-coverts and axillaries whitish, with ashy bases to the feathers; quills dusky below, ashy along the inner edge. Total length 6·5 inches, culmen 0·55, wing 2·65, tail 2·85, tarsus 0·9.

Hab. Peru and Bolivia.

a, *b*. ♂ ad. sk.	Tambo Valley, Peru, Oct.	Henry Whitely [C.].
c, *d*. ♂; *e*. ♀ ad. sk.	Tambo Valley, Oct. (*H. Whitely*).	Sclater Coll.
f, *g*. ♂ ♀ ad. sk.	Tambo Valley, Oct. (*H. Whitely*).	Salvin-Godman Coll.

92. DIUCA.

Type.

Diuca, *Reichenb. Av. Syst.* pl. lxxviii. (1850) ..... D. diuca.
Hedyglossa, *Cab. Mus. Hein.* Th. i. p. 135 (1850) ..... D. diuca.

Range. Patagonia and Chili to Bolivia and Peru.

Key to the Species.

a. With a patch of rufous on either side of the vent; outer tail-feathers with a large white terminal spot; no white patch on wing.
  a'. Larger; wing 3·2–3·6 inches ..... *diuca*, p. 800.
  b'. Smaller; wing 3·1 inches..... *minor*, p. 801.
b. With no rufous on the sides of the vent; no white spot on the outer tail-feathers; a large white patch on the primaries .... *speculifera*, p. 802.

1. Diuca diuca.

Fringilla diuca, *Molina, Saggio Hist. Nat. Chili*, p. 249 (1782); *Gm. Syst. Nat.* i. p. 915 (1788); *Vieill. N. Dict. d'Hist. Nat.* xii. p. 245 (1817); *Eyd. & Gerv. Mag. de Zool.* 1836, p. 18, pl. 69; *Gay, Hist. Chile, Zool.* p. 359 (1847).
Dolichonyx grisea, *Less. L'Inst.* ii. p. 316 (1834).
Emberiza diuca, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 77.
Pipilo cinereus, *Peale, U.S. Expl. Exped., Birds*, p. 123 (1848).
Euspiza diuca, *Gray, Gen. B.* iii. App. p. 30 *c* (1849); *Cass. U.S. Expl. Exped., Birds*, p. 135 (1858).
Diuca diuca, *Bp. Consp.* i. p. 476 (1850); *Licht. Nomencl. Av. Berol.* p. 43 (1854).
Hedyglossa diuca, *Cab. Mus. Hein.* Th. i. p. 135 (1850).
Diuca vera, *Burm. J. f. O.* 1860, p. 255; *id. Reis. La-Plata St.* ii. p. 483 (1861).
Diuca grisea, *Sel. Cat. Amer. B.* p. 111 (1862); *id. P. Z. S.* 1867, pp. 322, 377; *id. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Sharpe, P. Z. S.* 1881, p. 7; *Salvin, Cat. Strickl. Coll.* p. 228 (1882); *id. P. Z. S.* 1883, p. 421.
Phrygilus diuca, *Philippi & Landb. Arch. f. Naturg.* 1863, p. 119; *Gray, Hand-l. B.* ii. p. 90, no. 7323 (1870).

Adult male. General colour above slaty grey, usually with a

slight wash of brown (remains of the seasonal plumage) on the mantle and back; the lower back, rump, and upper tail-coverts clearer slaty grey; wing-coverts slaty grey like the back; bastard-wing, primary-coverts, quills, and tail-feathers black, externally edged with slaty grey, whiter on the margin of the primaries and browner on the inner secondaries; four outer tail-feathers with a large white spot at the end of the inner web, increasing in extent towards the outermost; crown of head like the back; lores, feathers below the eye, and ear-coverts blackish, washed with slaty grey; upper and lower edge of eyelid white; cheeks and throat pure white; sides of neck slaty grey; fore neck and chest, sides of body and flanks clear slaty grey; breast and abdomen pure white; a distinct patch of chestnut on the sides of the vent; thighs paler chestnut, ashy grey behind; under tail-coverts white, margined with chestnut; under wing-coverts and axillaries slaty grey, the lower series white at the ends; quills below dusky, ashy white along the inner edge. Total length 7 inches, culmen 0·6, wing 3·6, tail 2·6, tarsus 0·8.

Adult female. Differs from the male in being browner where the latter is grey; ear-coverts brown; cheeks, throat, breast, and abdomen white; fore neck, chest, and sides of body pale ashy brown, inclining to reddish brown on the flanks, and to orange on the sides of the vent. Total length 6·8 inches, culmen 0·6, wing 3·2, tail 2·7, tarsus 0·85.

From the number of specimens which have brown edges to the grey feathers, it is evident that this species has a seasonal plumage.

Hab. Chili.

a, *b*. ♂ ♀ ad. sk.	Chili.	Sclater Coll.
c, *d*. ♂ ♀ ad. sk.	Chili.	Salvin-Godman Coll.
e. ♀ ad. st.	Chiloe (*C. Darwin*).	Zool. Society.
f. ♂ ad. st.	Chiloe.	Sir W. Burnett and Admiral Fitzroy [P.].
g. ♂ ad. st.	Valparaiso.	Lord Byron [P.].
h. Ad. sk.	Talcahuano, Chili (*A. H. Markham*).	Salvin-Godman Coll.
i, *k*. ♂ ♀ ad. sk.	Coquimbo, Chili, Nov. 1881 (*A. H. Markham*).	Salvin-Godman Coll.
l. ♀ ad. sk.	Coquimbo (*Dr. Coppinger*).	Voy. H.M.S. 'Alert.'

2. Diuca minor.

Diuca minor, *Bp. Consp.* i. p. 476 (1850); *Scl. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Durnf. Ibis*, 1878, p. 393.
Phrygilus minor, *Gray, Hand-l. B.* ii. p. 90, no. 7325 (1870).

Adult male. Similar to *D. grisea*, but smaller. Total length 6·2 inches, culmen 0·5, wing 3·4, tail 2·9, tarsus 0·8.

Adult female. Similar to the male, but browner and not so ashy. Total length 6 inches, culmen 0·5, wing 3·1, tail 2·4, tarsus 0·8.

Young male. Similar to the old male, but with the plumage more fluffy and the colours rather purer.

Hab. Patagonia.

a, b. ♂ ♀ ad. sk.	Rio Negro, Patagonia (*W. H. Hudson*).	Sclater Coll.
c. ♂ ad. sk.	Rio Negro (*W. H. Hudson*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Rio Negro.	W. H. Hudson [C.].
f. Juv. sk.	Tombo Point, Patagonia, Jan. 3, 1878.	H. Durnford [C.].

3. Diuca speculifera.

Emberiza speculifera, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 78; *D'Orb. Voy. Amér. Mérid., Zool.* p. 362, pl. 46. fig. 1 (1835–44).
Diuca speculifera, *Bp. Consp.* i. p. 476 (1850); *Burm. Th. Bras.* iii. p. 220, note (1856); *Scl. Cat. Amer. B.* p. 111 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *Scl. P. Z. S.* 1881, p. 486; *Tacz. Orn. Pérou*, iii. p. 41 (1886).
Phrygilus speculiferus, *Philippi & Landb. Arch. f. Naturg.* x. p. 467 (1863); *Scl. & Salv. P. Z. S.* 1867, p. 985, 1868, p. 569; *Gray, Hand-l. B.* ii. p. 90, no. 7324 (1870).

Adult male. General colour above clear slaty grey from the back to the tail; lesser and median coverts like the back; greater coverts, bastard-wing, primary-coverts, quills, and tail-feathers blackish, externally slaty grey, rather browner on the inner secondaries; primaries with a large white patch, extending for more than half of the outer web on the outer primaries and across the base of the inner primaries; the outer tail-feather white along the outer web; lores, sides of face, ear-coverts, and cheeks dusky slate-colour; below the eye a white spot; entire throat white; fore neck, breast, sides of body, and flanks clear slaty grey: abdomen, thighs, and under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, the inner edge white: "bill black; feet leaden black; iris clear brown, approaching orange" (*Jelski*). Total length 7·7 inches, culmen 0·6, wing 5·1, tail 2·9, tarsus 1.

Some specimens are browner than others, and show dusky shaft-lines on the back. This is probably the plumage of the young bird, but I have had no properly determined specimens before me.

Hab. Peru and Bolivia.

a. Ad. sk.	Bolivia (*Bridges*).	Sclater Coll.
b. Ad. sk.	Bolivia.	Mr. Bridges [C.].
c. ♀ ad. sk.	Andes of Lima (*W. Nation*).	Sclater Coll.
d. Ad. sk.	Salinas, Peru, July 17, 1867.	H. Whitely, Esq. [C.].
e. ♂ ad. sk.	Salinas, July 17 (*H. W.*).	Sclater Coll.
f, g. ♂ ad. sk.	Salinas, July 17 (*H. W.*).	Salvin-Godman Coll.

93. CORYPHOSPINGUS.

	Type.
Lophospiza, *Bp. Consp.* i. p. 470 (1850, *nec Kaup*)	C. cristatus.
Coryphospingus, *Cab. Mus. Hein.* Th. i. p. 145 (1850)....	C. cristatus.

Range. Colombia, Venezuela, Guiana to Brazil, Bolivia, and Peru.

Key to the Species.

a. With a brilliant scarlet crown, blackish on the sides.
  a'. Back ruddy brown; lower back and rump dull crimson; under surface of body crimson .... *cristatus* ♂, p. 803.
  b'. Back entirely grey; under surface of body white..... *pileatus* ♂, p. 804.
b. With no scarlet crest; head brown.
  c'. Lower back and rump dull crimson ..... *cristatus* ♀, p. 804.
  d'. Lower back and rump ashy grey ..... *pileatus* ♀, p. 805.

1. Coryphospingus cristatus.

Moineau de Cayenne, *Daubent. Pl. Enl.* iv. pl. 181. fig. 1.
Le Friquet huppé, *Buff. Hist. Nat. Ois.* iii. p. 496 (1775).
Fringilla cucullata, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 166 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 255.
Black-faced Finch, *Lath. Gen. Syn.* ii. pt. i. p. 253 (1783).
Fringilla cristata, *Gm. Syst. Nat.* i. p. 926 (1788); *Vieill. N. Dict. d'Hist. Nat.* xii. p. 197 (1817).
Araguira, *Azara, Apunt.* i. p. 499, no. 136 (1802).
Fringilla araguira, *Vieill. Ois. Chant.* pl. xxviii.* (1805).
Tachyphonus rubescens, *Swains.* (ubi?); *Gray, Gen. B.* ii. p. 365 (1844); *Hartl. Ind. Azara*, p. 9 (1847).
Emberiza araguira, *D'Orb. & Lafr. Syn. Av.* p. 81 (1837).
Lophospiza cristata, *Bp. Consp.* i. p. 470 (1850).
Coryphospingus cristatus, *Cab. Mus. Hein.* Th. i. p. 145 (1850); *Burm. Th. Bras.* iii. p. 213 (1856); *Scl. P. Z. S.* 1860, p. 276; *id. Cat. Amer. B.* p. 109 (1862); *Pelz. Orn. Bras.* p. 228 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Layard, Ibis*, 1873, p. 350; *Scl. & Salv. P. Z. S.* 1876, p. 16; *Tacz. P. Z. S.* 1879, p. 23; *Salv. Ibis*, 1880, pp. 352, 354, 1885, p. 216; *White, P. Z. S.* 1882, p. 598; *Tacz. Orn. Pérou*, iii. p. 28 (1886).
Tiaris cristatus, *Licht. Nomencl. Av.* p. 45 (1854).
Passerina cucullata, *Gray, Hand-l. B.* ii. p. 98, no. 7446 (1870).

Adult male. General colour above dark vinous-brown, brighter vinous-red on the lower back, rump, and upper tail-coverts; wing-coverts dusky brown, edged with vinaceous like the back; bastard-wing, primary-coverts, and quills dusky brown, the latter faintly edged with vinaceous; tail-feathers blackish, with faint vinaceous edges; crown of head crested, rich crimson, bordered across the forehead and along the sides of the crown with black; occiput, nape, and hind neck vinaceous brown, a little brighter than the back, as also the feathers above the eye and the sides of the crown; lores dusky, as also the feathers round the eye; eyelid whitish; ear-coverts dusky, washed with vinous; base of cheeks and chin ashy white; hinder cheeks, throat, and under surface of body deep crimson, a little more vinaceous on the lower abdomen, sides of body, and flanks; thighs ashy, washed with vinous; under tail-coverts crimson; under wing-coverts ashy whitish; edge of wing vinous; axillaries ashy, tinged with vinous; quills below dusky, ashy along the inner edge: "bill and feet pale slate-colour, the upper mandible darker; iris wood-brown" (*H. Durnford*). Total length 5·5 inches, culmen 0·5, wing 2·55, tail 2·3, tarsus 0·75.

Adult female. Much duller in colour than the male, and wanting the crimson crest. General colour above brown, including the head: the rump and upper tail-coverts vinous-red; wing-coverts like the back; quills and tail-feathers edged with brown; lores ashy whitish; ear-coverts brown tinged with vinous; cheeks and under surface of body pale vinous, browner on the fore neck and breast. Total length 6·7 inches, culmen 0·55, wing 2·45, tail 2·25, tarsus 0·75.

Hab. Brazil to Bolivia and Peru and north to Amazonia and Guiana.

a, b. ♀ ad. sk.	Salta, June 1878.	H. Durnford, Esq. [C.].
c. ♂ ad. sk.	Brazil.	Purchased.
d. ♂ ad. sk.	Pelotas, Rio Grande do Sul (*Joyner*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Ytararè, Aug. 17, 1820 (*J. Natterer*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Bolivia (*W. Bridges*).	Sclater Coll.
g, h. ♂ ♀ ad. sk.	Tilotilo, Prov. Yungas, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Tilotilo (*C. Buckley*).	Sclater Coll.
k. ♂ ad. sk.	Guajango, Peru (*Stolzmann*).	Sclater Coll.
l. ♀ ad. sk.	Potrero, Peru, Dec. 1874 (*H. Whitely*).	Sclater Coll.
m. ♀ ad. sk.	Potrero, Dec. (*H. Whitely*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Para, Aug. 5, 1872 (*E. L. Layard*).	Tweeddale Coll.
o. ♀ ad. sk.	Bartica Grove, British Guiana, Nov. 13, 1879 (*H. Whitely*).	Salvin-Godman Coll.

2. Coryphospingus pileatus.

? Emberiza ruficapilla, *Sparrm. Mus. Carls.* fasc. ii. pl. 44 (1787).
Montese cabeza de bermillion, *Azara, Apunt.* i. p. 432 (1802).
Tanagra cristatella, *Spix, Av. Bras.* ii. p. 40, pl. 53. fig. 1 (1824).
Fringilla pileata, *Neuwied, Beitr. Naturg. Bras.* iii. p. 605 (1831).
Passerina ornata, *Less. Echo du Monde Sav.* p. 231 (1844).
Tachyphonus cristatellus, *Gray, Gen. B.* ii. p. 365 (1844).
Tachyphonus pileatus, *Hartl. Ind. Azara*, p. 8 (1847).
Lophospiza pileata, *Bp. Consp.* i. p. 471 (1850).
Coryphospingus pileatus, *Cab. Mus. Hein.* Th. i. p. 146 (1850); *Burm. Thier. Bras.* iii. p. 214 (1856); *Cab. Mus. Hein.* Th. i. p. 146 (1850); *Scl. Cat. Amer. B.* p. 109 (1862); *id. & Salv. P. Z. S.* 1868, p. 167, 1869, p. 252; *Pelz. Orn. Bras.* p. 228 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Salv. Cat. Strickl. Coll.* p. 226 (1882); *Tacz. Orn. Pérou*, iii. p. 28 (1886).
Coryphospiza pileata, *Scl. P. Z. S.* 1855, p. 160.
Tiaris pileatus, *Licht. Nomencl. Av.* p. 45 (1854).
Passerina ruficapilla, *Gray, Hand-l. B.* ii. p. 98, no. 7447 (1870).

Adult male. General colour above dark slaty grey, slightly paler on the lower back and rump; lesser wing-coverts and median coverts like the back; greater coverts, bastard-wing, primary-coverts, and quills blackish brown, externally fringed with ashy brown; upper

tail-coverts dark slaty grey; tail-feathers black, with ashy tips, only visible below: crown of head bright scarlet; the forehead and a lateral band of long crested feathers black; lores ashy whitish; eyebrow clear slaty grey; eyelid white; ear-coverts slaty grey; cheeks light ashy grey, white anteriorly; throat, fore neck, and breast light ashy grey, whiter on the chin; abdomen white; sides of body and flanks and thighs rather darker ashy grey; under tail-coverts white; under wing-coverts and axillaries white; quills below dusky, ashy whitish along the inner edge: "upper mandible greyish horn-brown, the lower one reddish white; feet greyish fleshy brown; iris greyish brown" (*Neuwied*). Total length 5·5 inches, culmen 0·55, wing 2·65, tail 2·3, tarsus 0·7.

Adult female. Browner than the male and without the red crest or black stripes on the crown; similar to the male below, but brown where the male is grey: "iris clear brown" (*A. Goering*). Total length 4·8 inches, culmen 0·55, wing 2·5, tail 2·05, tarsus 0·75.

Hab. Brazil to Venezuela and Colombia.

a. ♂ ad. sk.	Brazil.	Sclater Coll.
b, c, d. Ad.; *e.* Juv. sk.	Bahia, Brazil (*Dr. Wucherer*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Bogotá.	Sclater Coll.
g. ♂ ad. sk.	Bogotá.	Purchased.
h. ♂ ad. sk.	Carupano, Venezuela, Feb. 1867 (*A. Goering*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Venezuela (*A. Goering*).	Sclater Coll.

94. LOPHOSPINGUS.

Lophospingus, *Cab. J. f. O.* 1878, p. 195 ..... Type. L. pusillus.

Range. Interior of Argentine Republic.

1. Lophospingus pusillus.

Gubernatrix pusilla, *Burm. J. f. O.* 1863, p. 254; *Gray, Hand-l. B.* ii. p. 115, no. 7715 (1870).
Lophospiza pusilla, *Burm. Reis. La-Plata St.* ii. p. 483 (1856).
Coryphospingus pusillus, *Salvin, Ibis*, 1880, p. 354, pl. ix. fig. 1.
Lophospingus pusillus, *Cab. J. f. O.* 1878, p. 195; *Scl. P. Z. S.* 1879, p. 460.

Adult. General colour above light ashy brown, clearer ashy on the lower back, rump, and upper tail-coverts; lesser wing-coverts light ashy grey; median and greater coverts black, tipped with pearly grey, browner on the inner ones; bastard-wing and primary-coverts black; quills blackish brown, edged with ashy brown, lighter ashy on the inner secondaries; two centre tail-feathers brown, the remainder black, fringed with ashy, the outer feathers with a large white patch at the end of the inner web; crown of head ashy brown, laterally black, forming a streak on each side of the crown; a long occipital crest of black plumes;

hind neck and sides of neck ashy grey; lores blackish, surmounted by a broad white eyebrow which extends to the nape; upper and lower edge of eyelid white; ear-coverts dark ashy brown; cheeks and throat white; fore neck, breast, sides of body, and flanks pale ashy grey; abdomen whiter; thighs and under tail-coverts white; under wing-coverts and axillaries white, with brown bases; quills below dusky, ashy along the inner edge: "bill flesh-colour, the upper mandible and tip of both dark brown; legs and feet slate-colour; iris light brown" (*H. Durnford*). Total length 5·1 inches, culmen 0·45, wing 2·5, tail 2·1, tarsus 0·65.

Adult female. Similar to the male. Total length 4·8 inches, culmen 0·45, wing 2·45, tail 2, tarsus 0·65.

Hab. Argentine Republic.

a. ♀ ad. sk.	Cordova (*Dr. A. Doering*).	Sclater Coll.
b. Ad. sk.	Tucuman, June 2, 1887.	H. Durnford, Esq. [C.].

95. SCHISTOSPIZA.

Head of *Schistospiza griseocristata*.

Range. Bolivia.

1. Schistospiza griseocristata.

Emberiza griseocristata, *D'Orb. & Lafr. Mag. de Zool.* 1837, p. 79; *D'Orb. Voy. Amér. Mérid., Ois.* p. 363, pl. 67. fig. 1 (1835–44); *Burm. Th. Bras.* iii. p. 215, note (1856).

Euspiza griseocristata, *Gray, Gen. B.* ii. p. 376 (1844).

Lophospiza griseocristata, *Bp. Consp.* i. p. 471 (1850).

Coryphospingus griseocristatus, *Cab. Mus. Hein.* Th. i. p. 145, note (1850); *Scl. Cat. Amer. B.* p. 162 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *id. P. Z. S.* 1879, p. 605; *Salv. Ibis*, 1880, p. 354.

Passerina griseocristata, *Gray, Hand-l. B.* ii. p. 98, no. 7448 (1870).

Adult. General colour above uniform light slaty grey: lesser and median wing-coverts like the back; greater series dusky, externally like the back; bastard-wing, primary-coverts, and quills dusky brown, externally edged with slaty grey; tail-feathers blackish brown, edged with ashy, the three outer ones with a large white mark at the end of the inner web; head crested like the back, but the crest-feathers a little browner with blackish centres; sides of face and ear-coverts dusky slate-colour; cheeks and under surface

of body light slaty grey, including the thighs; lower abdomen and under tail-coverts white; axillaries and under wing-coverts like the breast; quills dusky blackish below, ashy along the edge of the inner web. Total length 5·8 inches, culmen 0·55, wing 3, tail 2·4, tarsus 0·8.

Adult female or young (?). Differs from the bird described in being browner above, paler below, with a brown wash; above the ear-coverts a streak of dull white.

Hab. Bolivia.

a, b. Ad. et juv. sk.	Bolivia.	Mr. Bridges [C.].
c. Ad. sk.	Bolivia	Purchased.
d. Ad. sk.	Bolivia (*Bridges*).	Sclater Coll.
e, f. Ad. sk.	Tilotilo, Bolivia (*C. Buckley*).	Salvin-Godman Coll.

96. TIARIS.

Tiaris, *Swains. Zool. Journ.* iii. p. 351 (1827) ..... Type. T. ornata.

Range. Brazil.

1. Tiaris ornata.

Fringilla ornata, *Neuwied, Reis. Brasil.* ii. p. 191 (1821); *Temm. Pl. Col.* iii. pl. 208 (1823); *Neuwied, Beitr. Naturg. Bras.* iii. p. 610 (1831).

Tiaris ornata, *Swains. Zool. Journ.* iii. p. 351 (1827); *Gray, Gen. B.* ii. p. 375 (1844); *Bp. Consp.* i. p. 471 (1850); *Burm. Th. Bras.* iii. p. 257 (1856); *Gray, Hand-l. B.* ii. p. 96, no. 7432 (1870); *Pelz. Orn. Bras.* p. 228 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Salv. Cat. Strickl. Coll.* p. 226 (1882).

Adult. General colour above pearly grey, the rump white; lesser wing-coverts like the back; median and greater coverts grey, whitish at the ends; all the coverts round the bend of the wing, bastard-wing, primary-coverts, and quills black, with a white speculum at the base of the inner primaries, the inner secondaries externally pearly grey; upper tail-coverts pearly grey; tail-feathers blackish, white at the base of all but the centre ones; crown of head crested, black like the occiput and nape; lores and feathers round the eye black, as also the fore part of the cheeks; ear-coverts, hinder cheeks, and sides of neck white with a yellowish tinge; throat and fore neck black; sides of lower throat and fore neck tawny yellowish, the centre of the breast dark chestnut; abdomen, sides of body, and flanks paler tawny buff; thighs whitish; under tail-coverts deep tawny; under wing-coverts and axillaries white, slightly tinged with buff; edge of wing black; quills below ashy, greyish along the inner edge: "upper mandible greyish horn-brown, the lower one, as well as the edge of the upper one, lead-colour; feet pale reddish fleshy brown; iris greyish brown" (*Neuwied*). Total length 4·2 inches, culmen 0·4, wing 2·3, tail 1·75, tarsus 0·6.

Hab. Brazil.

a. ♂ ad. sk.	[Bahia.]	Salvin-Godman Coll.
b. Ad. sk.	[Bahia.]	Salvin-Godman Coll.
c. Ad. sk.	Bahia (*Wucherer*).	Sclater Coll.

97. RHODOSPINGUS.

Coryphospingus, pt., *auct. recent.* (*nec Cab.*).

Range. Ecuador to Peru.

1. Rhodospingus cruentus. (Plate XV. fig. 1.)

Tiaris cruenta, *Less. Rev. Zool.* 1844, p. 435; *Gray, Gen. B.* ii. p. 375 (1844); *Burm. Th. Bras.* iii. p. 215, note (1856).
Lophospiza cruenta, *Bp. Consp.* i. p. 471 (1850).
Coryphospingus cruentus, *Cab. Mus. Hein.* Th. i. p. 145, note (1850); *Scl. P. Z. S.* 1860, p. 276; *id. Cat. Amer. B.* p. 109 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Tacz. P. Z. S.* 1877, p. 322.
Tiaris comptus, *Licht. Nomencl. Av.* p. 45 (1854, *teste Burm.*).
Passerina cruenta, *Gray, Hand-l. B.* ii. p. 98, no. 7449 (1879).

Adult male. General colour above glossy black, the feathers of the rump slightly mottled with greyish bases; wing-coverts black like the back; quills black, with a concealed white patch at the base of the inner web; upper tail-coverts and tail-feathers black; crown of head black, with a large sincipital mark of crimson; lores, sides of face, feathers round eye, ear-coverts, and hinder cheeks black; the fore part of the cheeks crimson like the throat and under surface of the body; chin buffy whitish; sides of fore neck and of breast black; abdomen slightly paler than the breast, whitish near the vent; sides of body and flanks streaked with black; thighs buffy whitish, black at the base; under tail-coverts pale crimson; under wing-coverts and axillaries white; quills below black, white towards the base of the inner web. Total length 4·2 inches, culmen 0·5, wing 2·25, tail 1·5, tarsus 0·65.

Adult female. Different from the male. General colour above brown, slightly paler on the lower back, rump, and upper tail-coverts; lesser wing-coverts like the back, remainder of the coverts, as well as the quills, dusky, edged with brown like the back; tail-feathers dark brown, edged with paler brown; crown of head brown like the back; lores and feathers round the eye buffy whitish; ear-coverts brown, with ochreous-buff shaft-lines; cheeks, throat, and under surface of body ochreous buff, paler on the abdomen and under tail-coverts; under wing-coverts and axillaries white, slightly tinged with ochreous buff; quills below dusky brown, white along the inner edge. Total length 4·3 inches, culmen 0·55, wing 2·1, tail 1·45, tarsus 0·65.

The Ecuadorian specimens are much paler on the abdomen than the Peruvian one described. As, however, this pale coloration is accompanied by sandy-brown edges to the feathers of the upper

surface, it may be an accompaniment of seasonal plumage or a sign of immaturity.

Hab. Ecuador and Peru.

a. ♂ ad. sk.	Balzar Mountains, Ecuador (*Illingworth*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Babahoyo, Ecuador, July 1859.	L. Fraser [C.].
c, *d*. ♂ ♀ ad. sk.	Babahoyo, Ecuador, July 1859 (*L. Fraser*).	Sclater Coll.
e. ♂ juv. sk.	Pallatanga, Ecuador, Sept. 1858 (*L. Fraser*).	Sclater Coll.
f. ♂ ad. sk.	Lechugal, Peru (*Jelski*).	Sclater Coll.

2. Rhodospingus mentalis. (Plate XV. fig. 2.)

Adult male. Similar to *R. cruentus*, but distinguished by the black spot on the chin. Total length 4 inches, culmen 0·5, wing 2·05, tail 1·45, tarsus 0·65.

Hab. Puna Island in the Gulf of Guayaquil.

a. ♂ ad. sk.	Puna Island (*Villagomez*).	Salvin-Godman Coll.

98. PAROARIA.

	Type.
Paroaria, *Bp. Saggio Distr. Met. An. Vertebr.* p. 141 (1832)	P. cucullata.
Calyptophorus, *Cab. Arch. f. Naturg.* xiii. p. 329 (1847)	P. cucullata.
Coccopsis, *Reichenb. Syst. Nat.* pl. lxxvii. fig. 8 (1850) ..	?

Range. Venezuela to Guiana, Brazil, Bolivia, and Peru.

Key to the Species.

a. With ashy-grey wing-coverts, resembling the back; hind neck grey, with ovate spots of white — *cucullata*, p. 809.
b. With black wing-coverts.
  a'. Rump and lower back grey — *larvata*, p. 811.
  b'. Rump and lower back black.
    a''. Ear-coverts crimson like the crown; with black on the throat.
      a'''. Bill entirely yellow; no black on the upper mandible; legs yellow — *capitata*, p. 812.
      b'''. Upper mandible black, lower one yellow; legs blackish.
        *a*⁴. Lores and feathers round the eye black, extending in a streak above the ear-coverts — *gularis*, p. 813.
        *b*⁴. No black on the lores or round the eye — *cervicalis*, p. 814.
    b''. Ear-coverts black; throat entirely crimson — *nigrigenis*, p. 814.

1. Paroaria cucullata. (Plate XVI. fig. 1.)

Le Cardinal Dominiquain, *Daubent. Pl. Enl.* iv. pl. 103; *Buff. Hist. Nat. Ois.* iii. p. 501, note (1775).

Le Cardinal huppé, *Brown, Ill. Zool.* p. 53, pl. 23 (1776).
Crested Dominican Grosbeak, *Lath. Gen. Syn.* ii. pt. i. p. 123 (1783).
Loxia cucullata, *Lath. Ind. Orn.* i. p. 378 (1790).
Loxia coronata, var. L. dominicanæ, *Müller & Shaw, Cimelia Phys.* p. 4, pl. 2 A (1796).
Crestudo roxo, *Azara, Apunt.* i. p. 461 (1802).
Le Paroare huppé, *Vieill. Ois. Chant.* p. 105, pl. lxx. (1805).
Fringilla cucullata (*nec P. L. S. Müll.*), *Licht. Verz. Doubl.* p. 22 (1823); *Hartl. Ind. Azara*, p. 9 (1847).
Calyptrophorus cucullatus, *Cab. Arch. f. Natury.* xiii. p. 329 (1847); *id. Mus. Hein.* Th. i. p. 145 (1850); *Licht. Nomencl. Av. Berol.* p. 44 (1854).
Spiza cucullata, *Gray, Gen. B.* ii. p. 375 (1849).
Paroaria cucullata, *Bp. Consp.* i. p. 471 (1850); *Burm. Th. Bras.* iii. p. 210 (1856); *id. Reis. La-Plata St.* ii. p. 482 (1861); *Scl. Cat. Amer. B.* p. 108 (1862); *Pelz. Orn. Bras.* p. 228 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1871); *Durnf. Ibis*, 1877, p. 171; *Gibson, Ibis*, 1880, p. 19; *Salv. Cat. Strickl. Coll.* p. 225 (1882); *White, P. Z. S.* 1882, p. 598.
Passerina cucullata, *Gray, Hand-l. B.* ii. p. 97, no. 7440 (1870).

Adult male. General colour above ashy grey, mottled on the hind neck and upper mantle with longitudinal, ovate, whitish centres to the feathers; wing-coverts dusky blackish, externally ashy grey like the back; bastard-wing black, narrowly edged with ashy grey; primary-coverts and quills black, edged externally with ashy grey, lighter on the primaries, broader and slightly browner on the secondaries; upper tail-coverts rather darker ashy grey than the back: tail-feathers blackish, fringed with ashy grey; crown of head crested, scarlet; occiput and nape ashy grey, mottled with white centres like the hind neck; lores, feathers round the eye, ear-coverts, cheeks, throat, and fore neck scarlet, the feathers on the latter part pointed and lanceolate; sides of neck white, like the sides of the chest and the remainder of the under surface; sides of body and flanks washed with ashy grey; thighs ashy externally, white internally; under tail-coverts white; under wing-coverts and axillaries white, slightly tinged with ashy; quills below dusky, ashy whitish along the inner edge: "bill grey; legs black; iris black" (*Alan Peel*). Total length 7·5 inches, culmen 0·65, wing 3·8, tail 3·1, tarsus 0·95.

Adult female (Conchitas; W. H. Hudson). Similar to the male. Total length 7·5 inches, culmen 0·65, wing 3·9, tail 3·55, tarsus 0·95.

Young. Differs from the male in being browner above, the quills and tail-feathers also browner, the outermost of the latter more distinctly fringed with whitish externally; head less crested, and the parts which are scarlet in the adult ochreous brown, often intermixed with a few scarlet feathers; the white of the underparts somewhat sullied, and the under wing-coverts especially washed with brown.

Hab. Southern Brazil and Argentine Republic to Bolivia.

a. Ad. sk.	S. Brazil.	
b ♀ juv.; *c*. ♀ ad. sk.	Conchitas, Buenos Ayres, Sept. 1808 (*W. H. Hudson*).	Zoological Society. Sclater Coll.
d. Juv. st.	Maldonado.	
e. ♂ ad. sk.	Uruguay, Feb. 1877.	Sir W. Burnett and Adm. Fitzroy [P.].
f. ♂ juv. sk.	Rio Paraná, April 14, 1876.	Alan Peel [C.]. H. Durnford, Esq. [C.].
g, *h*. Ad. sk.	Paraná (*Burmeister*).	Salvin-Godman Coll.
i. Ad. sk.	Bolivia.	Sclater Coll.

2. Paroaria larvata. (Plate XVI. fig. 2.)

? The Dominican Cardinal, *Edwards, Nat. Hist. B.* iii. pl. 127 (1750).
Le Cardinal Dominiquain, *Briss. Orn.* iii. p. 116, pl. vi. fig. 4 (1760); *Daubent. Pl. Enl.* iv. pl. 55. fig. 2.
? Le Grosbec du Brésil, *Briss. t. c.* p. 246 (1760).
? Loxia dominicana, *Linn. Syst. Nat.* i. p. 301 (1766).
Paroare, *Buff. Hist. Nat. Ois.* iii. p. 500 (1775).
? Dominican Grosbeak, *Lath. Gen. Syn.* ii. pt. i. p. 123 (1783).
Fringilla larvata, *Bodd. Tabl. Pl. Enl.* p. 4 (1783).
? Paroare, *Vieill. Ois. Chant.* p. 104, pl. 69 (1805).
Fringilla dominicana, *Neuwied, Beitr. Naturg. Bras.* iii. p. 594 (1831).
Spiza dominicana, *Gray, Gen. B.* ii. p. 375 (1849).
Spiza larvata, *Gray, t. c.* p. 375 (1849).
Paroaria dominicana, *Bp. Consp.* i. p. 471 (1850); *Burm. Th. Bras.* iii. p. 211 (1856); *Salv. Cat. Strickl. Coll.* p. 225 (1882).
Calyptrophorus dominicanus, *Cab. Mus. Hein.* Th. i. p. 145 (1850); *Licht. Nomencl. Av.* p. 44 (1854).
Paroaria larvata, *Scl. Cat. Amer. B.* p. 108 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Forbes, Ibis*, 1881, p. 337.
Passerina dominica, *Gray, Hand-l. B.* ii. p. 97, no. 7441 (1870).

Adult. General colour above ashy grey, the hind neck and mantle more or less black, the feathers being mostly broadly edged with black, and having white bases on the hind neck; wing-coverts entirely black, with a narrow fringe of white on the ends of the greater series; bastard-wing and primary-coverts black; quills black, edged with greyish white, broader on the secondaries; upper tail-coverts a little darker ashy grey than the back; tail-feathers black, edged with ashy grey, the outer ones fringed with white at the end of the inner web; crown of head slightly crested, crimson, as also the lores, feathers round the eye, ear-coverts, cheeks, and entire throat, the feathers of the lower throat being pointed; remainder of under surface pure white; the sides of body and flanks washed with ashy grey; thighs and under tail-coverts white; under wing-coverts and axillaries white, the coverts near the edge of the wing mottled with black bases; quills below blackish, ashy white along the inner edge. Total length 7 inches, culmen 0·65, wing 3·55, tail 2·8, tarsus 0·95.

Young. Browner than the adults above, and mottled on the mantle with dusky instead of black; the head blackish; wing-

coverts and quills edged with ochreous brown; sides of head and throat, including all the parts which are crimson in the adult, sandy brown; rest of under surface white, the sides washed with ochreous brown.

Hab. Brazil.

a. Ad. sk.	Brazil.	Sclater Coll.
b. Ad. sk.	Rio Claro, Prov. Goiaz, Brazil (*Joyner*).	Salvin-Godman Coll.
c. Ad. sk.	Novo Fribourgo (*J. Vouds*).	Salvin-Godman Coll.
d. Juv. sk.	S.E. Brazil.	Sclater Coll.
e. Ad. sk.	Bahia (*Wucherer*).	Salvin-Godman Coll.
f, *g*. Ad. sk.	Pernambuco (*W. A. Forbes*).	Salvin-Godman Coll.

3. Paroaria capitata. (Plate XVI. fig. 5.)

Capitá, *Azara, Apunt.* i. p. 509 (1802).

Tachyphonus capitatus, *D'Orb. & Lafr. Syn. Av.* p. 29 (1837); *D'Orb. Voy. Amér. Mérid., Ois.* p. 278, pl. 19. fig. 2 (1835–44); *Hartl. Ind. Azara*, p. 9 (1847).

Tanagra capitata, *Gray, Gen. B.* ii. p. 364 (1844).

Paroaria capitata, *Bp. Consp.* i. p. 472 (1850); *Burm. Th. Bras.* iii. p. 212 (1856); *id. Reis. La-Plata St.* ii. p. 482 (1861); *Scl. Cat. Amer. B.* p. 108 (1862); *Pelz. Orn. Bras.* p. 228 (1871); *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *White, P. Z. S.* 1882, p. 598.

Passerina capitata, *Gray, Hand-l. B.* ii. p. 97, no. 7444 (1870).

Adult. General colour above uniform black, with a narrow line of white separating off the black from the crimson head, caused by the white bases to the feathers of the nape; the rump slightly mottled with ashy bases, the long side plumes of the rump tipped with white; wing-coverts, quills, and tail-feathers entirely black, with a narrow fringe of white at the end of the inner web of the outer tail-feather; crown of head crested, crimson like the lores, sides of face, ear-coverts, cheeks, and chin; throat black, this colour skirting the cheeks and ascending behind the ear-coverts to the occiput; sides of neck pure white, nearly forming a collar on the nape; under surface of body pure white, the sides of the body and flanks slightly washed with ashy, the latter mottled with dusky bars; thighs white, black posteriorly; under tail-coverts, under wing-coverts, and axillaries white, with a patch of black near the edge of the wing; quills below dusky, ashy along the inner edge; bill and legs orange-yellow in skin. Total length 6·5 inches, culmen 0·55, wing 3·1, tail 2·7, tarsus 0·8.

Young. Brown above instead of black, the white under surface washed with brown below, the crimson of the head replaced by ochreous brown.

Hab. Brazil, Paraguay, and the Argentine Republic.

a. ♀ ad. sk.	Cuyaba, Brazil, 1842 (*J. Natterer*).	Salvin-Godman Coll.
b. Juv. sk.	Paraguay.	Sclater Coll.

4. Paroaria gularis. (Plate XVI. fig. 4.)

Le Cardinal brun d'Amérique, *Briss. Orn.* iii. App. p. 67, pl. 4. fig. 4 (1760).
Tanagra gularis, *Linn. Syst. Nat.* i. p. 316 (1766); *Gray, Gen. B.* ii. p. 364 (1844).
? Tangara brun d'Amérique, *Daub. Pl. Enl.* v. pl. 155. fig. 2.
Le Rouge Cap, *Buff. Hist. Nat. Ois.* iii. p. 267 (1778).
? Tanagra fusca, *P. L. S. Müll. Syst. Nat.*, Anhang, p. 159 (1776); *Cass. Proc. Philad. Acad.* 1864, p. 254.
Red-headed Tanager, *Lath. Gen. Syn.* ii. pt. i. p. 228 (1783).
Nemosia gularis, *Bonn. et Vieill. Enc. Méth.* ii. p. 788 (1823).
Tachyphonus gularis, *D'Orb. Voy. Amér. Mérid., Ois.* p. 279 (1835-44).
Calyptrophorus gularis, *Cab. in Schomb. Reis. Guian.* iii. p. 678 (1848); *Licht. Nomencl. Av.* p. 45 (1854).
Paroaria gularis, *Bp. Consp.* i. p. 472 (1850); *Scl. Cat. Amer. B.* p. 108 (1862); *id. & Salv. P. Z. S.* 1866, p. 181, 1867, p. 512; *iid. Nomencl. Av. Neotr.* p. 30 (1873); *iid. P. Z. S.* 1873, p. 264; *Salv. Cat. Strickl. Coll.* p. 225 (1882); *id. Ibis*, 1886, p. 303; *Tacz. Orn. Pérou*, iii. p. 27 (1886).
Coccopsis gularis, *Cab. Mus. Hein.* Th. i. p. 145 (1850).
Passerina gularis, *Gray, Hand-l. B.* ii. p. 97, no. 7442 (1870).
Paroaria nigrigenis (*nec Lafr.*), *Salvin, Ibis*, 1885, p. 215.

Adult female. General colour above glossy black, with greyish bases to the feathers of the lower back and rump; wing-coverts, quills, and tail-feathers black; crown of head crimson; lores, feathers round the eye and behind the latter black; ear-coverts, cheeks, and chin crimson; throat and centre of fore neck black, with reddish bases to the feathers; sides of neck pure white, like the under surface of the body; thighs white, with black bases; under tail-coverts white; under wing-coverts and axillaries white, with a black patch near the outside of the wing; quills below dusky blackish, ashy white along the inner edge. Total length 6·5 inches, culmen 0·6, wing 3·15, tail 2·75, tarsus 0·8.

Young. Brown above instead of black, the wing-coverts like the back; quills blackish, edged with brown; tail-feathers brownish black; head brown like the back; eyebrow, sides of head, and throat pale tawny instead of crimson as in the adult.

Hab. Guiana to Amazonia and Peru.

a. Ad. sk.	[Cayenne.]	Sclater Coll.
b. ♀ ad. sk.	Camacusa, British Guiana, Feb. 25, 1882 (*H. Whitely*).	Salvin-Godman Coll.
c. ♀ juv. sk.	Camacusa, May 30, 1882 (*H. Whitely*).	Salvin-Godman Coll.
d. Ad.; *e.* Juv. sk.	British Guiana.	Sir R. Schomburgk [P.].
f. Ad. st.	British Guiana.	Sir R. Schomburgk [P.].
g. Ad. sk.	Island of Mexiana, Amazons (*A. R. Wallace*).	Sclater Coll.
h. ♀ ad. sk.	Island of Mexiana, Amazons, Jan. 1849 (*A. R. Wallace*).	Salvin-Godman Coll.

i, k. Ad. et juv. sk.	Chamicuros, E. Peru (*E. Bartlett*).	Gould Coll.
l. ♀ ad. sk.	Pebas, E. Peru (*J. Hauxwell*).	Sclater Coll.
m, n. Ad. sk.	Pebas, E. Peru (*J. Hauxwell*).	Salvin-Godman Coll.

5. Paroaria cervicalis. (Plate XVI. fig. 6.)

Paroaria cervicalis, *Scl. Cat. Amer. B.* p. 108 (1862); *id. & Salv. Nomencl. Av. Neotr.* p. 30 (1870).
Passerina cervicalis, *Gray, Hand-l. B.* ii. p. 97, no. 7443 (1870).
Paroaria gularis, *Pelz. Orn. Bras.* p. 228, pt. (1871) *.

Adult male. Similar to *P. gularis*, but without any black on the lores or round the eye, these parts being crimson like the ear-coverts and crown. Total length 6·5 inches, culmen 0·65, wing 3·2, tail 2·7, tarsus 0·85.

Hab. Brazil to Bolivia.

a. ♂ ad. sk.	Matogrosso, Brazil (*J. Natterer*).	Salvin-Godman Coll.
b. Ad. sk.	Bolivia.	Sclater Coll. (Type of *P. cervicalis*.)

6. Paroaria nigrigenis. (Plate XVI. fig. 3.)

Nemosia nigrogenys, *Lafr. Rev. Zool.* 1846, p. 273.
Tanagra nigroaurita, *Cass. Proc. Philad. Acad.* iv. p. 85 (1848); *id. Journ. Philad. Acad.* i. p. 296, pl. 41. fig. 3.
Calyptrophorus nigrogenys, *Cab. in Schomb. Reis. Guian.* iii. p. 678 (1848); *Licht. Nomencl. Av.* p. 44 (1854).
Coccopsis nigrigenys, *Cab. Mus. Hein.* Th. i. p. 145 (1845).
Paroaria nigrigenis, *Scl. Cat. Amer. B.* p. 108 (1862); *Taylor, Ibis*, 1864, p. 83; *Scl. & Salv. Nomencl. Av. Neotr.* p. 30 (1873); *Salv. Cat. Strickl. Coll.* p. 225 (1882).
Passerina nigrogenys, *Gray, Hand-l. B.* ii. p. 97, no. 7445 (1870).

Adult. General colour above glossy black, the rump slightly mottled with ashy bases; wing-coverts, quills, and tail-feathers entirely black; crown of head crested, crimson; occiput and nape black, like the hind neck; the occipital feathers with white bases; lores, eyelid, feathers below the eye, and ear-coverts black, as also the base of the chin; cheeks and throat crimson, the feathers of the latter lanceolate, and extending on to the fore neck; sides of neck white, extending nearly to the occiput; remainder of under surface of body white; thighs black, tipped with white: under tail-coverts, under wing-coverts, and axillaries white, with a patch of black near the edge of the wing; quills below blackish, ashy whitish along the inner edge; bill black. Total length 6·5 inches, culmen 0·6, wing 3·2, tail 2·65, tarsus 0·8.

* Von Pelzeln is probably right in calling this bird by the name of *P. gularis*, for the differences between it and *P. cervicalis* consist merely in the amount of black on the region of the eye. As this certainly varies greatly in *P. gularis*, it is quite possible that *P. cervicalis* may be found to merge into that species.

Young. Entirely brown above, including the sides of the face; sides of neck and under surface of body white, the cheeks and throat yellowish buff; quills and tail dark brown, the primaries edged with ashy.

Hab. Venezuela, Trinidad, and Guiana.

a. Ad. sk.	Trinidad.	Purchased.
b. Juv. sk.	Cayenne.	Sclater Coll.
c. Ad. sk.	Venezuela.	Sclater Coll.
d. Ad. sk.	[Venezuela.]	Gould Coll.

99. GUBERNATRIX.

Type.
Gubernatrix, *Less. Compl. Buff.* viii. p. 295 (1837) ..... G. cristata.
Lophocoryphus, *Gray, List Gen. B.* 1840, p. 47 ..... G. cristata.

Head of *Gubernatrix cristata.*

Range. Argentine Republic to Northern Patagonia.

1. Gubernatrix cristata.

Crestudo amarillo, *Azara, Apunt.* i. p. 464 (1802).
Coccothraustes cristata, *Vieill. N. Dict. d'Hist. Nat.* xiii. p. 531 (1817).
Emberiza gubernatrix, *Temm. Pl. Col.* iii. pls. 63, 64 (1823).
Emberiza cristata, *Swains. Zool. Illustr.* 1st ser. iii. pl. 148 (1823).
Emberiza cristatella, *Bonn. et Vieill. Enc. Méth.* ii. p. 928 (1823); *Vieill. Gal. Ois.* i. p. 84, pl. 67 (1825).
Lophocoryphus gubernatrix, *Gray, List Gen. B.* p. 47 (1840); *Licht. Nomencl. Av.* p. 42 (1854).
Gubernatrix cristatella, *Gray, Gen. B.* ii. p. 378 (1844); *Hartl. Ind. Azara*, p. 9 (1847); *Bp. Consp.* i. p. 470 (1850); *Burm. Th. Bras.* iii. p. 257 (1856); *id. Reis. La-Plata St.* ii. p. 482 (1861); *Gray, Hand-l. B.* ii. p. 115, no. 7714 (1870); *Pelz. Orn. Bras.* p. 231 (1871); *Sel. P. Z. S.* 1872, p. 548; *id. & Salv. Nomencl. Av. Neotr.* p. 31 (1873); *White, P. Z. S.* 1883, p. 38.

Adult male. General colour above yellowish green, streaked with black on the mantle and back; the lower back and rump uniform; scapulars like the back; lesser wing-coverts yellowish green, those round the top of the wing uniform bright golden yellow; median coverts black, externally yellowish green and tipped with yellow,

forming a wing-band ; greater coverts and inner secondaries blackish, externally yellowish green, brighter yellow on the margins and greyish white towards the tips ; bastard-wing, primary-coverts, and quills blackish, edged with yellowish green, purer yellow on the primaries, which are edged with hoary white towards the end of the outer web ; upper tail-coverts dusky, greenish externally ; centre tail-feathers blackish, edged with yellowish green ; the next pair blackish, with a yellow spot at the end of the inner web ; all the rest yellow with blackish shafts, the outer feather with a longitudinal blackish mark at the end of the outer web ; centre of crown black, with an elongated crest ; the occiput yellow ; nape and hind neck uniform yellowish green ; lores black ; a broad eyebrow of golden yellow as well as the eyelid ; behind the eye a black spot ; ear-coverts uniform yellowish green ; cheeks golden yellow ; throat black ; sides of neck and fore neck golden yellow : chest and sides of body yellowish green ; breast, abdomen, and under tail-coverts golden yellow ; thighs yellow : under wing-coverts and axillaries golden yellow ; quills below blackish, yellow along the inner edge. Total length 7·5 inches, culmen 0·6, wing 3·75, tail 3·15, tarsus 1·05.

Adult female. Differs from the male in being duller coloured and browner above, in having the supraloral streak and cheeks white, and the chest and the sides of the body ashy brown. Total length 8·3 inches, culmen 0·75, wing 3·65, tail 3·45, tarsus 0·95.

The specimens from the Argentine Republic are much darker and greener, with more boldly marked streaks of black.

Hab. Argentine Republic to Northern Patagonia.

a. ♂ ad. sk.	Rio Negro, Patagonia, Sept. (*W. H. Hudson*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Rio Negro, Patagonia, Sept. (*W. H. Hudson*).	Sclater Coll.
c. ♂ ad. sk.	Uruguay, Feb.	Alan Peel, Esq. [C.].
d. ♂ ad. sk.	Paraguay.	Sclater Coll.
e. ♂ ad. sk.	Cosquin, Cordova, Argentine Republic, Aug. 16 (*E. W. White*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Cosquin, Oct. 11 (*E. W. White*).	Salvin-Godman Coll.

ADDENDA.

The following additions to the present volume consist principally of an enumeration of the specimens presented by Capt. Wardlaw Ramsay with his donation of the Tweeddale Collection. There are also some notices of American species and subspecies recently recognized by Mr. Ridgway in his 'Manual of North-American Birds,' a work which has only just appeared, and was not available for quotation in the body of the work. Professor Newton has also shown me some remarkable Finches from Hawaii, recently collected by Mr. Scott Wilson, which have completely altered my opinion as to the relations of the Sandwich Islands' Avifauna. These birds, which will be shortly described, are evidently true *Fringillidæ*, and, consequently, their allies, *Loxioides* and *Psittirostra*, described as *Dicæidæ* in the 10th volume of the 'Catalogue,' will have to be restored to their proper position among the Finches *.

Add:— Page 21. **Chloris chloris.**

ω. ♀ ad. sk.	Cookham, Berks, March 26, 1868 (*R. B. S.*).	Tweeddale Coll.
α′. ♂ ad. sk.	Cookham, June 1865 (*R. B. S.*).	Tweeddale Coll.
β′. ♂ ad. sk.	Sierra Nevada, S. Spain, March (*H. Saunders*).	Tweeddale Coll.
γ′. ♂ ad. sk.	Granada, May (*H. S.*).	Tweeddale Coll.
δ′. ♂ ad. sk.	Seville, Feb. 27 (*H. S.*).	Tweeddale Coll.
ε′. ♂ ad. sk.	Seville, March 16 (*H. S.*).	Tweeddale Coll.
ζ′, η′. ♂ ad. sk.	Podrumok River, Cis-caucasia, Feb.	Imp. Museum, S. Petersburg [E.].

Add:— Page 26. **Chloris sinica.**

s. Ad. sk.	Nagasaki, Japan.	Tweeddale Coll.
t. ♂ ad. sk.	Amoy, April 1866 (*R. Swinhoe*).	Tweeddale Coll.
u. ♀ ad. sk.	Amoy, Dec. 10 (*R. Swinhoe*).	Tweeddale Coll.
v, *w.* ♂ ad. sk.	Canton.	Tweeddale Coll.

* What is *Fringilla anna*, Dole, Hawaiian Annual, 1880? (*Cf.* Ibis, 1880, p. 241.)

Add:— Page 28. **Chloris kawarahiba.**

g. ♂ ad. sk.	Kobe, Japan (*R. Bergman*).	Tweeddale Coll.
h. ♂ ad. sk.	Kobe, Japan, Dec. 28, 1870 (*R. Bergman*).	Tweeddale Coll.
i. ♀ ad. sk.	Kobe, Japan, Jan. 27, 1870 (*R. Bergman*).	Tweeddale Coll.
k. ♂ ad. sk.	Hakodadi, April 15, 1865, (*H. Whitely*).	Tweeddale Coll.
l. ♀ ad. sk.	Hakodadi, April 5, 1865 (*H. Whitely*).	Tweeddale Coll.

Add:— Page 28. **Eophona melanura.**

n. ♂ ad. sk.	Amoy, Nov. 1886 (*R. Swinhoe*).	Tweeddale Coll.
o. ♀ ad. sk.	Amoy, Dec. 1867 (*R. Swinhoe*).	Tweeddale Coll.
p. ♀ ad. sk.	Canton.	Tweeddale Coll.
q. ♂ ad. sk.	China (*Tuckett*).	Tweeddale Coll.

Add:— Page 30. **Eophona personata.**

f. ♂ ad. sk.	Japan.	Tweeddale Coll.

Add:— Page 36. **Coccothraustes coccothraustes.**

i'. Ad. sk.	Germany.	Tweeddale Coll.
k'. ♂ ad. sk.	Granada, Spain, March 1871 (*H. Saunders*).	Tweeddale Coll.
l'. ♀ ad. sk.	Parryville, Turkey, April 17 (*T. Robson*).	Tweeddale Coll.
m'. ♂ ad. sk.	Asia Minor (*T. Robson*).	Tweeddale Coll.
n'. ♀ ad. sk.	Asia Minor, April 28 (*T. R.*).	Tweeddale Coll.
o' ♀ ad. sk.	Asia Minor, May (*T. R.*).	Tweeddale Coll.

Add:— Page 39. **Coccothraustes japonicus.**

h. ♂ ad. sk.	Hakodadi, Nov. 28 (*H. Whitely*).	Tweeddale Coll.
i. Ad. sk.	Yezo, Japan.	Tweeddale Coll.

Add:— Page 40. **Coccothraustes humii.**

d. ♂ ad. sk.	Fort Attock, Feb. 6, 1879 (*R. G. W. R.*).	Tweeddale Coll.

Add:— Page 41. **Mycerobas melanoxanthus.**

ξ. ♀ ad. sk.	Simla, June 1876 (*R. C. Beavan*).	Tweeddale Coll.
o. ♂ ad. sk.	Simla, Aug. 1876 (*R. C. B.*).	Tweeddale Coll.

Add:— Page 44. **Pycnorhamphus icteroides.**

i'. ♂ ad. sk.	Peiwar Kotul, Afghanistan, June 20, 1879 (*R. G. W. R.*).	Tweeddale Coll.
k', l'. ♂ ♀ ad. sk.	Cashmere, Oct. 1876 (*J. Biddulph*).	Tweeddale Coll.
m'. ♂ juv. sk.	Cashmere, July 1867 (*T. C. Jerdon*).	Tweeddale Coll.
n', o'. ♂ ♀ ad. sk.	Murree, Sept. 14 (*C. H. T. Marshall*).	Tweeddale Coll.
p', q'. ♂, *r'*. ♀ ad. sk.	Fagoo, Simla, Aug. 1866 (*R. C. Beavan*).	Tweeddale Coll.
s'. ♀ ad. sk.	Mahasu, near Simla, Sept. 1866 (*R. C. B.*).	Tweeddale Coll.
t', u'. ♂ ♀ ad. sk.	Mahasu, March 1867 (*Dr. Scott*).	Tweeddale Coll.

Add:— Page 46. **Pycnorhamphus affinis.**

v, w. ♂ ♀ ad. sk.	Rungbee, Darjiling.	Tweeddale Coll.

Add:— Page 47. **Pycnorhamphus carneipes.**

u', v'. ♂ ♀ ad. sk.	Byan Kheyl, Afghanistan, April 30, 1879 (*R. G. W. R.*).	Tweeddale Coll.
w'. ♀ juv. sk.	Gilgit, June 15, 1876 (*J. Biddulph*).	Tweeddale Coll.
x'. ♀ ad. sk.	Turkestan (*Dr. Severtzoff*).	Tweeddale Coll.

Page 66. **Guiraca cærulea.**

Mr. Ridgway separates the western bird as *Guiraca cærulea eurhyncha* (Man. N. Amer. B. p. 446), from the Western United States, north to Colorado, California, &c., south throughout Mexico. It is *Guiraca eurhyncha* of Coues, Amer. Nat. viii. p. 563 (1874), a name omitted in my synonymy.

Add:— Page 70. **Guiraca indigotica.**

Mr. Ridgway separates the species from Western Mexico as

Passerina parellina indigotica, *Ridgw. Man. N. Amer. B.* p. 447.

It will be noticed that Mr. Ridgway associates this Grosbeak with the Painted Buntings, which he calls *Passerina*, and the form, if it be proved to be distinct, will bear the name of *Passerina indigotica* (Ridgw.) in American works.

Add:— Page 81. **Oryzoborus funereus.**

q. ♀ ad. sk.	Meco Island, Nov. 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.

Add :— Page 109. **Spermophila minuta.**

t. ♂ ad. sk. Para, Jan. 14, 1873 (*E. L. Layard*). Tweeddale Coll.

Add :— Page 123. **Spermophila moreleti.**

z. ♀ ad. sk. Cozumel Island (*G. F. Gaumer*). Salvin-Godman Coll.
a', *b'*. ♂ imm. sk. Meco Island, Nov. 1885 (*G. F. Gaumer*). Salvin-Godman Coll.

Add :— Page 128. **Spermophila gutturalis.**

e'. ♂ ad. sk. Para, Aug. 23, 1872 (*E. L. Layard*). Tweeddale Coll.
f'. ♂ ad. sk. Para, Nov. 13. 1872 (*E. L. Layard*). Tweeddale Coll.

Page 145. **Phonipara lepida.**

The synonyms of *P. intermedia* should be added to *P. pusilla* (p. 147), and the following specimens recorded after the latter :—

s, *t*, *u*. Imm. sk. Cozumel Island (*G. F. Gaumer*). Salvin-Godman Coll.

Page 151. **Phonipara fuliginosa.**

Alter number of species to "4."

Add :— Page 152. **Volatinia jacarini.**

γ. ♂; δ, ε. ♀ ad. sk. Para, Nov. 27, 1872 (*E. L. Layard*). Tweeddale Coll.

Add :— Page 161. **Cardinalis cardinalis.**

o, *p*. ♂ ♀ ad. sk. Ohio (*J. A. Hurst*). Tweeddale Coll.

Add :— Page 163. **Cardinalis coccineus.**

a'–*i'*. ♂ ; *k'*, *l'*, *m'*, *n'*. ♀ ad. sk. Cozumel Island (*G. F. Gaumer*). Salvin-Godman Coll.
o'. ♀ ad. sk. Meco Island, Nov. 1885 (*G. F. Gaumer*). Salvin-Godman Coll.

Page 164. Add :—

Subsp. β'. **Cardinalis yucatanicus.**

Cardinalis cardinalis yucatanicus, *Ridgw. Man. N. Amer. B.* p. 443 (1887).

This form is separated by Mr. Ridgway, but I cannot see the least grounds for its recognition.

Add:— Page 177. **Fringilla spodiogenys.**

f. ♂ ad. sk.	Tunis.	Tweeddale Coll.

Add:— Page 178. **Fringilla montifringilla.**

ξ. ♀ ad. sk.	Morocco.	Tweeddale Coll.
o. ♀ ad. sk.	Ortakeuy, Turkey, Oct. 20 (*T. Robson*).	Tweeddale Coll.
π. ♂ ad. sk.	Ortakeuy, Nov. 22 (*T. Robson*).	Tweeddale Coll.
ρ. ♀ imm. sk.	Constantinople, Dec. 30 (*T. Robson*).	Tweeddale Coll.
σ, τ. ♂ ad. sk.	Yezo.	Tweeddale Coll.
υ. ♀ ad. sk.	Hakodadi, March 24 (*H. Whitely*).	Tweeddale Coll.
φ. ♂ ad. sk.	Peking, Oct. 9 (*R. Swinhoe*).	Tweeddale Coll.
χ, ψ. ♂ ♀ ad. sk.	Shanghai, March 1873 (*R. Swinhoe*).	Tweeddale Coll.
ω. ♀ ad. sk.	China (*Tuckett*).	Tweeddale Coll.

Add:— Page 185. **Carduelis carduelis.**

χ. Juv. sk.	Cookham, Berks, Sept. 8, 1868 (*R. B. S.*).	Tweeddale Coll.

β. Hybrid between *C. major* and *C. caniceps.*

ψ. ♂ ad. sk.	Krasnoyarsk, Nov. 1, 1880 (*H. Seebohm*).	Tweeddale Coll.
ω. ♂ ad. sk.	Krasnoyarsk, March 20, 1883.	Imp. Museum, S. Petersburg [E.].

Add:— Page 189. **Carduelis caniceps.**

γ, δ. ♂ ♀ ad. sk.	Turkestan, Oct. (*Dr. Severtzoff*).	Tweeddale Coll.
ε. ♂ ad. sk.	Turkestan, Dec. 21, 1865 (*Dr. Severtzoff*).	Tweeddale Coll.
ζ. ♂ ad. sk.	Byan Kheyl, Afghanistan, May 21, 1879 (*R. G. W. R.*).	Tweeddale Coll.
η. Ad. sk.	Simla, March 1867 (*Dr. Scott*).	Tweeddale Coll.

Add:— Page 195. **Chrysomitris tristis.**

a'. ♂ ad. sk.	Albany, New York (*J. A. Hurst*).	Tweeddale Coll.
b'. ♀ ad.; *c'.* ♂ juv. sk.	Canada (*Col. C. Shelley*).	Tweeddale Coll.

Add:— Page 201. **Chrysomitris spinoides.**

a'. ♂ ad. sk.	Fagoo, near Simla, August 1866 (*R. C. Beavan*).	Tweeddale Coll.
β'. Juv. sk.	Mahasu, near Simla, Sept. 1866 (*R. C. Beavan*).	Tweeddale Coll.
γ'. ♂ ad. sk.	Simla, July 1866 (*R. C. Beavan*).	Tweeddale Coll.

Add :— Page 206. **Chrysomitris mexicana.**

z. ♂ ad. sk.	Cozumel Island.	Salvin-Godman Coll.

Add :— Page 212. **Chrysomitris spinus.**

s', *t'*. ♂ ♀ ad. sk.	Cappagh, Co. Waterford, Ireland, Nov. 1877.	R. J. Ussher, Esq. [P.].
u', *v'*. ♂ ad. sk.	Valencia, Spain, Jan. 19, 1873 (*Howard Saunders*).	Tweeddale Coll.
w'. ♀ ad. sk.	Valencia, Spain, Feb. 6, 1873 (*Howard Saunders*).	Tweeddale Coll.
x', *y'*. ♂ ♀ ad. sk.	Guiksu, Asia Minor, Oct. 18, 1866 (*T. Robson*).	Tweeddale Coll.
z', *a.* ♂ ad. sk.	Yezo, Japan.	Tweeddale Coll.
β. ♂ imm. sk.	Yezo, Japan.	Tweeddale Coll.

Add :— Page 232. **Callacanthis burtoni.**

u, *v*. ♂ ♀ ad. sk.	Gulmerg, Cashmere, July (*T. C. Jerdon*).	Tweeddale Coll.
w, *x*. ♂ ♀ ad. sk.	Simla, March 1867 (*Dr. Scott*).	Tweeddale Coll.

Add :— Page 238. **Acanthis brevirostris.**

z. ♂ ad. sk.	Kisslovodsk, Cis-caucasia, Feb. 7, 1886.	Imp. Museum, S. Petersburg [E.].
a'. ♂ ad sk.	Turkestan (*Dr. Severtzoff*).	Tweeddale Coll.
b'. ♂ ad. sk.	Doba, June 7, 1874 (*J. Biddulph*).	Tweeddale Coll.
c'. ♀ ad. sk.	Leh, July 1 (*J. Biddulph*).	Tweeddale Coll.

Add :— Page 240. **Acanthis cannabina.**

ω', *a.* ♂ ♀ ad. sk.	Valencia, Spain, April (*H. Saunders*).	Tweeddale Coll.
b. ♂ ad. sk.	Asia Minor (*T. Robson*).	Tweeddale Coll.
c. ♀ ad. sk.	Guiksu, Asia Minor, Nov. 21 (*T. Robson*).	Tweeddale Coll.

Add :— Page 244. **Acanthis fringillirostris.**

t. ♀ ad. sk.	Cis-caucasia, Nov. 21, 1866.	Imp. Museum, S. Petersburg [E.].
u. ♂ ad. sk.	Bokhara, June 13, 1885 (*Grum-Grizimailo*).	Imp. Museum, S. Petersburg [E.].

Add :— Page 245. **Acanthis linaria.**

η'. ♂ ad. sk.	Highgate, Nov. 20, 1868 (*R. B. S.*).	Tweeddale Coll.
θ'. ♀ ad. sk.	Cookham, Berks, Nov. 10, 1868 (*R. B. S.*).	Tweeddale Coll.
ι'. ♂ imm. sk.	Asia Minor, Nov. 4 (*T. Robson*).	Tweeddale Coll.
κ'. Ad. sk.	Canada.	Tweeddale Coll.
λ'. Ad. sk.	Canada (*Col. C. Shelley*).	Tweeddale Coll.

Add :— Page 250. **Acanthis holboelli.**

i. ♂ ad. sk. Archangel, June 27, 1872 (*J. A. Harvie-Brown*). Tweeddale Coll.

Add :— Page 251. **Acanthis rostrata.**

i. Ad. sk. Greenland. Tweeddale Coll.

Add :— Page 252. **Acanthis rufescens.**

δ'. Ad. sk. Whitehill, Nov. 1870 (*R. G. W. R.*). Tweeddale Coll.

Add :— Page 254. **Acanthis exilipes.**

p'. ♀ ad. sk. Yen-e-say Valley, April 7, 1877 (*H. Seebohm*). Tweeddale Coll.

q'. ♂ ad. sk. Krasnoyarsk, Feb. 21, 1881 (*H. Seebohm*). Tweeddale Coll.

Page 258. Genus **MONTIFRINGILLA.**

In 'Key to the Species,' read as follows :—

d'''. Head brown like the back. [p. 261.
a[1]. Lesser and median wing-coverts white .. *alpicola* hiem.,

Add :— Page 261. **Montifringilla adamsi.**

q. ♀ ad. sk. Leh, June 30 (*J. Biddulph*). Tweeddale Coll.
r. ♂ ad. sk. Indus Valley, June 29 (*J. Biddulph*). Tweeddale Coll.
s. Ad. sk. Hills north of Kumaon. Tweeddale Coll.

Add :— Page 263. **Montifringilla ruficollis.**

r. ♀ ad. sk. Thibet, April 1875 (*L. Mandelli*). Tweeddale Coll.

Add :— Page 264. **Montifringilla blanfordi.**

Pyrgilauda barbata, *Prjev. Ibis*, 1887, p. 412 (transl.).

Add :— Page 265. **Montifringilla davidiana.**

a. Ad. sk. Kobdo, Mongolia, Dec. 1877 (*Potanin*). Imp. Museum, S. Petersburg [E.].

Page 267. **Montifringilla sordida.**

For "Sutley Valley" *read* "Sutlej Valley."

π. Ad. sk.	Chamba (*Stackhouse Pinwill*).	Tweeddale Coll.
ρ, *σ*, *τ*. Ad. sk.	Sutlej Valley.	Tweeddale Coll.
υ. Ad. sk.	Simla, March 1867 (*Dr. Scott*).	Tweeddale Coll.
φ, *χ*. ♂ ♀ ad. sk.	Middle range of hills north of Masuri.	Tweeddale Coll.

Add :— Page 269. **Montifringilla brandti.**

s'. ♂ ad. sk.	Chahil Gumbaz, Yarkand, March 26, 1874 (*J. Biddulph*).	Tweeddale Coll.
t'. ♀ ad. sk.	Kufalonz, Yarkand, June 12, 1874 (*J. Biddulph*).	Tweeddale Coll.
u'. ♀ ad. sk.	Sujet Pass, Yarkand, Oct. 16, 1874 (*J. Biddulph*).	Tweeddale Coll.
v'. ♀ juv. sk.	Kangra Lama Pass, Sikhim, Oct. 5, 1870 (*W. T. Blanford*).	Tweeddale Coll.

Page 272. Add :—

10 *a*. Montifringilla roborowskii.

Leucosticte roborowskii, *Prjev. Ibis*, 1887, p. 411 (transl.).

Hab. Thibet.

Add :— Page 273. **Montifringilla gigliolii.**

f, *g*. ♂ ♀ ad. sk.	Lake Baikal.	Tweeddale Coll.

Add :— Page 278. **Montifringilla brunneinucha.**

i. ♂ ad. sk.	Sidemi, E. Siberia (*M. Janskowsky*).	Tweeddale Coll.
k. ♀ ad. sk.	Hakodadi, Feb. (*J. Blakiston*).	Tweeddale Coll.

Add :— Page 280. **Rhodopechys sanguinea.**

i. ♀ ad. sk.	Khokand, March (*Dr. Severtzoff*).	Tweeddale Coll.

Add :— Page 282. **Rhodospiza obsoleta.**

z–*a'*. ♂ ♀ ad. sk.	Turkestan, March 11, 1866 (*Dr. Severtzoff*).	Tweeddale Coll.

Add :— Page 287. **Erythrospiza mongolica.**

u. Ad. sk.	Gilgit, Dec. 5, 1879 (*J. Scully*).	Tweeddale Coll.

Add :— Page 289. **Petronia petronia.**

e'. ♂ ad. sk.	Ortakeuy, Turkey, October 15, 1862 (*T. Robson*).	Tweeddale Coll.
f'. ♂ ad. sk.	Hanankoi, Asia Minor, October 16, 1866 (*T. Robson*).	Tweeddale Coll.
g'. ♂ ad. sk.	Constantinople, April 1869 (*T. Robson*).	Tweeddale Coll.
h'. Ad. sk.	Marocco (*Olcese*).	Tweeddale Coll.

Add:— Page 292. **Petronia brachydactyla.**

i. Ad. sk.	Sugerah, Palestine, June 15, 1864 (*H. B. T.*).	Tweeddale Coll.
k. ♂ ad. sk.	Plain of Zebdany, June 13, 1864 (*H. B. T.*).	Tweeddale Coll.

Add:— Page 293. **Petronia flavicollis.**

r. Ad. sk.	Oudh.	Tweeddale Coll.
v. ♀ ad. sk.	Umballa, N.W.P., November 1866 (*R. C. Beavan*).	Tweeddale Coll.
φ. Juv. sk.	Jhansi, August 1868 (*C. H. T. Marshall*).	Tweeddale Coll.
χ. ♂ juv. sk.	Khandala, May 12, 1877 (*S. B. Fairbank*).	Tweeddale Coll.
ψ, *ω*. ♂ ♀ ad. sk.	Malabar.	Tweeddale Coll.
a'. Juv. sk.	Mysore (*R. G. W. R.*).	Tweeddale Coll.
β'. ♂ ad. sk.	Bangalore (*R. G. W. R.*).	Tweeddale Coll.

Add:— Page 295. **Petronia dentata.**

f. ♂ ad. sk.	Kokai, Bogos Land, June 17, 1868 (*W. Jesse*).	Tweeddale Coll.
g. Juv. sk.	Bogos Land (*Jesse*).	Tweeddale Coll.

Add:— Page 297. **Petronia petronella.**

r. ♂ ad. sk.	Eland's Post, April 30 (*T. C. Atmore*).	Tweeddale Coll.

Add:— Page 301. **Passer montanus.**

n. ♀ ad. sk.	Hanankoi, Asia Minor, Oct. 22, 1866 (*T. Robson*).	Tweeddale Coll.
o. ♀ ad. sk.	Sanju, Yarkand, Oct. 27 (*J. Biddulph*).	Tweeddale Coll.
p. Juv. sk.	Shillong, June 1875 (*A. W. Chennell*).	Tweeddale Coll.
q. ♂ ad. sk.	Tonghoo, Jan. 1, 1874 (*R. G. W. R.*).	Tweeddale Coll.
r. Ad. sk.	Pegu.	Tweeddale Coll.
s. Juv. sk.	Malacca (*Dr. Maingay*).	Tweeddale Coll.
t, *u*, *v*. Ad. sk.	Java.	Tweeddale Coll.
w. ♀ ad. sk.	Takow, Formosa, Jan. 1869 (*R. Swinhoe*).	Tweeddale Coll.
x. Ad. sk.	Yezo, Japan.	Tweeddale Coll.
y. ♂ ad. sk.	Hakodadi, April 27, 1865 (*H. Whitely*).	Tweeddale Coll.
z. Ad. sk.	Kobe, Japan, Dec. 31, 1869 (*R. Bergman*).	Tweeddale Coll.
a'. Ad. sk.	Liu Kiu Islands.	H. Pryer, Esq. [C.].

Add:— Page 307. **Passer saturatus.**

Passer montanus saturatus, *Stejneger*, *Proc. U.S. Nat. Mus.* x. p. 414 (1887).

The Museum has lately received from Mr. Pryer a specimen of an

adult Tree-Sparrow from the Liu Kiu Islands. It is absolutely the same as the ordinary *P. montanus*, and it is evident that Dr. Stejneger founded his *P. saturatus* on a young bird of *P. montanus*.

Add :— Page 307. **Passer domesticus.**

σ. ♂ ad. sk.	Wadenhoe, Northamptonshire, July 3, 1886 (dun-coloured var.).	Colonel Irby [P.].
τ. ♂ ad. sk.	Irtakoi, Turkey, May 28, 1863 (*T. Robson*).	Tweeddale Coll.
υ. ♂ ad. sk.	Morocco (*Olcese*).	Tweeddale Coll.
φ. ♂ ad. sk.	Island of Rodriguez.	Mrs. O'Halloran.
χ. ♂ ad. sk.	Byan Kheyl, Afghanistan, May 9, 1879 (*R. G. W. R.*).	Tweeddale Coll.
ψ. ♂ ad. sk.	Leh, Ladak, Aug. 28 (*J. Biddulph*).	Tweeddale Coll.
ω, ♂ juv. sk.	Umballa, Oct. 1866 (*R. C. Beavan*).	Tweeddale Coll.
α', *β'*. ♂ ♀ ad. sk.	Umballa, Nov. 1866 (*R. C. Beavan*).	Tweeddale Coll.
γ'. ♀ juv. sk.	Simla, July 1866 (*R. C. Beavan*).	Tweeddale Coll.
δ', *ε'*. ♂ ♀ ad. sk.	Jubbulpur district.	Tweeddale Coll.
ζ'. ♂ ad. sk.	Maunbhoom, Feb. 1865 (*R. C. Beavan*).	Tweeddale Coll.
η'. Juv. sk.	Kashinghur, Maunbhoom, March 1864 (*R. C. Beavan*).	Tweeddale Coll.
θ'. ♂ ad. sk.	Madras (*R. G. W. R.*).	Tweeddale Coll.
ι'. ♀ ad. sk.	Tonghoo, July 1875 (*R. G. W. R.*).	Tweeddale Coll.
κ'. ♂ ad. sk.	Pegu.	Tweeddale Coll.
λ'. ♂ ad. sk.	Assam, Jan. 1876 (*A. W. Chennell*).	Tweeddale Coll.

Add :— Page 317. **Passer hispaniolensis.**

o'. ♂ ad. sk.	San Nicholas, Cape Verde Islands (*J. G. Keulemans*).	Tweeddale Coll.
π', *ρ'*. ♂; *σ'*. ♀ ad. sk.	Byan Kleyl, Afghanistan, May 1879 (*R. G. W. R.*).	Tweeddale Coll.

Add :— Page 323. **Passer jagoensis.**

i. ♀ ad. sk.	S. Vincent, Jan. 23 (*J. G. Keulemans*).	Tweeddale Coll.

Add :— Page 325. **Passer ruficinctus.**

a. ♂ ad. sk.	Lado, Equatorial Africa, April 9, 1884.	Emin Pasha [P.].

Add :— Page 325. **Passer cinnamomeus.**

g. ♀ ad. sk.	Sonarmurg, Cashmere, July 14, 1874 (*J. Biddulph*).	Tweeddale Coll.
h. ♂ ad. sk.	Sindh Valley, July 20, 1874 (*J. Biddulph*).	Tweeddale Coll.
i. ♂ ad. sk.	Simla, June 1866 (*R. C. Beavan*).	Tweeddale Coll.
k. ♀ ad. sk.	Simla, July 1866 (*R. C. Beavan*).	Tweeddale Coll.
l, *m*. ♂ ad. sk.	Shillong, May 1870 (*A. W. Chennell*).	Tweeddale Coll.
n, *o*. ♂ ♀ ad. sk.	Karen Hills, April 3, 1875 (*R. G. W. R.*).	Tweeddale Coll.

Add :— Page 329. **Passer rutilans.**

f. ♀ ad. sk.	Hakodadi (*H. Whitely*).	Tweeddale Coll.
g. ♂ ad. sk.	Ningpo, China (*R. Swinhoe*).	Tweeddale Coll.
h. ♂ ad. sk.	Chekiang Province, May 1875 (*Shanghai Mus.*).	Tweeddale Coll.
i. Ad. sk.	Tonghoo, Burmah.	Tweeddale Coll. (Type of *P. assimilis.*)

After carefully comparing the type of *P. assimilis* with Chinese examples of *P. rutilans*, I am unable to see the smallest grounds for their specific separation. It seems to me even doubtful whether some mistake may not have occurred with regard to the locality of the male specimen, which was purchased of Mr. Whitely, and was *not* procured by Capt. Wardlaw Ramsay himself. It is quite possible that a Chinese skin has got mixed up in the collection sold by Mr. Whitely. The female specimen from the Karen Hills is undoubtedly only *P. cinnamomeus*, agreeing with other specimens from the Himalayas ; and therefore a Sparrow of the *P. rutilans* type has to be rediscovered in Burmah.

Page 329. **Passer assimilis.**

This species will have to be united to *P. cinnamomeus* (*vide suprà*).

Add :— Page 330. **Passer flaveolus.**

m, n. ♂ ad. sk.	Tonghoo, Feb. 16, 1875 (*R. G. W. R.*).	Tweeddale Coll.
o, p. ♂ ; *q, r.* ♀ ad. sk.	Karen-nee, March 1874 (*R. G. W. R.*).	Tweeddale Coll.

Add :— Page 332. **Passer emini.**

b. ♂ ad. sk.	Lado, Equatorial Africa, Nov. 2, 1883.	Emin Pasha [P.].
c. ♂ ad. sk.	Redjaf, Jan. 31, 1884.	Emin Pasha [P.].
d, e. ♂ imm. sk.	Lado, Feb. 18, 1884.	Emin Pasha [P.].

Add :— Page 333. **Passer arcuatus.**

q. ♂ ad. sk.	Otjimbinque, Damara Land, Jan. 8, 1862 (*C. J. Andersson*).	Tweeddale Coll.

Add :— Page 334. **Passer swainsoni.**

m, n. ♂ ♀ ad. sk.	Senafé, Abyssinia, May 25, 1868 (*W. Jesse*).	Tweeddale Coll.

Add :— Page 336. **Passer diffusus.**

b'. ♀ ad. sk.	Otjimbinque, Damara Land, Sept. 2, 1863 (*C. J. Andersson*).	Tweeddale Coll.
c'. Ad. sk.	Zanzibar.	

β. P. gularis.

d'. Ad. sk.	Dakar, Senegal.	Tweeddale Coll.
e'. Ad. sk.	Senegal (*L. Laglaize*).	Tweeddale Coll.
f'. Ad. sk.	Gaboon (*Du Chaillu*).	Tweeddale Coll.

Add :— Page 337. **Passer ammodendri.**

g. ♂ ad. sk.	Turkestan (*Dr. Severtzoff*).	Tweeddale Coll.
h. ♂ ad. sk.	Kashgar, Dec. 1873 (*J. Biddulph*).	Tweeddale Coll.

Add :— Page 356. **Serinus icterus.**

t'. ♂ ad. sk.	Elephant Vley, Damaraland, Aug. 4, 1859 (*C. J. Andersson*).	Tweeddale Coll.
u'. Ad. sk.	Zambesi (*Meller*).	Tweeddale Coll.
v'. ♂ ad. sk.	Lamu, E. Africa, Aug. 31, 1885.	F. J. Jackson, Esq. [P.].
w'. ♂ ad. sk.	Manda Island, E. Africa.	F. J. Jackson, Esq. [P.].
x'. ♀ ad. sk.	Tobbo, Equatorial Africa, May 17, 1883.	Emin Pasha [P.].

The female sent by Emin Pasha seems to be *Serinus barbatus* (Heuglin). It has the ear-coverts and sides of the neck olive-yellow like the back, and not ashy as in *S. icterus*. I cannot determine yet whether *S. barbatus* is really a distinct species, as Emin Pasha's specimen is matched by others from Senegambia and Damara Land. Mr. Jackson's specimen from Manda Island is rather different from ordinary examples of *S. icterus*, and may be the male of *S. barbatus*. It will be necessary to obtain more material before the question of the separation of these two species can be determined.

Add :— Page 363. **Serinus striolatus.**

h. ♂ ad. sk.	Senafé, Abyssinia, April 24, 1868 (*W. Jesse*).	Tweeddale Coll.

Add :— Page 365. **Serinus xanthopygius.**

c. ♂ ad. sk.	Kokai, Bogos Land, August 10, 1868 (*W. Jesse*).	Tweeddale Coll.

Add :— Page 367. **Serinus angolensis.**

n. ♂ ad. sk.	Elephant Vley, Damaraland, Aug. 21, 1859 (*C. J. Andersson*).	Tweeddale Coll.

Add :— Page 368. **Serinus serinus.**

m. ♂ ad. sk.	Seville, Spain, March 28, 1870 (*Howard Saunders*).	Tweeddale Coll.
n. ♂ ad. sk.	Valencia, Spain, Nov. 26, 1871 (*Howard Saunders*).	Tweeddale Coll.

Add:— **Page 372. Serinus canonicus.**

e. Juv. sk.	Cedars of Lebanon, Palestine, June 16, 1864 (*H. B. Tristram*).	Tweeddale Coll.

Add:— **Page 373. Serinus pusillus.**

o. ♂ ad. sk.	Altai Mountains, April 19, 1878.	Imp. Museum, S. Petersburg [E.].
π. ♂ ad. sk.	Karjil, Yarkand, July 9 (*J. Biddulph*).	Tweeddale Coll.
ρ. ♂ ad. sk.	Panja, Yarkand (*J. Biddulph*).	Tweeddale Coll.
σ, τ. ♂ ♀ ad. sk.	Byan Kheyl, Afghanistan, Nov. 6, 1879 (*R. G. W. R.*).	Tweeddale Coll.
υ, φ. Ad. sk.	Simla, March 1867 (*Dr. Scott*).	Tweeddale Coll.

Add:— **Page 382. Sycalis arvensis.**

v, w. ♂ ♀ ad. sk.	Chili.	Purchased.

Add:— **Page 391. Carpodacus erythrinus.**

δ, ε. ♂ ♀ ad. sk.	Yen-e-say, E. Siberia, June 1877 (*H. Seebohm*).	Tweeddale Coll.
ζ. ♂ ad. sk.	Byan Kheyl, Afghanistan, June 28, 1879 (*R. G. W. R.*).	Tweeddale Coll.
η. ♂ ad. sk.	Shaluzan, Afghanistan, June 24, 1879 (*R. G. W. R.*).	Tweeddale Coll.
θ. ♂ ad. sk.	Umbala, April 1866 (*Dr. Scott*).	Tweeddale Coll.
ι. ♀ ad. sk.	Umbala, Nov. 1866 (*Dr. Scott*).	Tweeddale Coll.
κ, λ. ♂ ad. sk.	N. Khasia Hills, March 1876 (*A. W. Chennell*).	Tweeddale Coll.
μ, ν. ♀ ad. sk.	Maunbhoom, April 1864 (*R. C. Beavan*).	Tweeddale Coll.
ξ. ♂ ad. sk.	Ahmednuggur (*S. B. Fairbank*).	Tweeddale Coll.
ο, π. ♂ ♀ ad. sk.	Khandala, March 1876 (*S. B. Fairbank*).	Tweeddale Coll.
ρ. ♂ ad. sk.	Khandala, April 1876 (*S. B. Fairbank*).	Tweeddale Coll.
σ, τ, υ, φ. ♂ ad. sk.	Tonghoo, April 6, 1874 (*R. G. W. R.*).	Tweeddale Coll.
χ. ♀ ad. sk.	Karen Hills, March 10, 1874 (*R. G. W. R.*).	Tweeddale Coll.

Add:— **Page 399. Carpodacus rubicilla.**

a, b. ♂ ♀ ad. sk.	N. Caucasus.	Henry Seebohm, Esq. [P.].

Add:— **Page 400. Carpodacus severtzovi.**

e'. ♀ ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.

Add:— Page 404. **Carpodacus grandis.**

y. ♂ ad. sk.	Peiwar Kotul, Afghanistan, June 20, 1879 (*R. G. W. R.*).	Tweeddale Coll.
z. ♂ ad. sk.	Hills north of Kumaon.	Tweeddale Coll.

Add:— Page 406. **Carpodacus rhodochlamys.**

i. ♂ ad. sk.	Altai Mountains, Feb. 19, 1879.	Imp. Museum, S. Petersburg [E.].
k. ♀ ad. sk.	Altai Mountains, Sept. 18, 1878.	Imp. Museum, S. Petersburg [E.].
l. ♀ ad. sk.	Turkestan (*Dr. Severtzoff*).	Tweeddale Coll.
m. ♂ ad. sk.	Ferghana, Feb. 5, 1882 (*e dono H. Seebohm*).	Tweeddale Coll.

Add:— Page 407. **Carpodacus roseus.**

f. ♂ ad. sk.	Irkutsk.	Henry Seebohm, Esq. [P.].
g. ♂ imm. sk.	Sidemi, Ussuri Country, Dec. 8, 1884.	Imp. Museum, S. Petersburg [E.].
h, i. ♂ ♀ ad. sk.	Lake Baikal.	Tweeddale Coll.
k. ♂ ad. sk.	Yezo, Japan (*C. McVean*).	Tweeddale Coll.

Add:— Page 409. **Carpodacus purpureus.**

p'. ♂ ad. sk.	Canada (*Col. C. Shelley*).	Tweeddale Coll.
q'. ♂ juv. sk.	Albany, New York (*J. A. Hurst*).	Tweeddale Coll.

Add:— Page 418. **Carpodacus edwardsi.**

x'. ♀ ad. sk.	Moupin, Nov. 20, 1869 (*A. David*).	Tweeddale Coll.

Add:— Page 420. **Carpodacus frontalis.**

Carpodacus mexicanus frontalis, *Ridgw. Man. N. Amer. B.* p. 391 (1887).

Mr. Ridgway comes to the same conclusion as myself (*anted*, p. 421) that *C. rhodocolpus* is inseparable from *C. frontalis*. At the same time he suggests a new subspecies from Lower California :—

19*a*. **Carpodacus ruberrimus.**

Carpodacus frontalis ruberrimus, *Ridgw. Man. N. Amer. B.* p. 391, note (1887).

Ought this not to stand in American books as *C. mexicanus ruberrimus*?

Add:— Page 425. **Carpodacus thura.**

η. ♂ ad. sk.	Chola Range, E. Sikhim, Aug. 25 (*W. T. Blanford*).	Tweeddale Coll.

Add:— Page 429. **Carpodacus pulcherrimus.**

x. ♀ ad. sk.	Nepal Dolaka, Dec. 1875 (*L. Mandelli*).	Tweeddale Coll.

Add:— Page 435. **Loxia curvirostra.**

α. L. curvirostra.

c'. ♂ ad. sk.	Highgate, Nov. 16, 1868 (*R. B. S.*).	Tweeddale Coll.
d'. ♀ ad. sk.	Highgate, Dec. 12, 1868 (*R. B. S.*).	Tweeddale Coll.
e'. ♂ ad. sk.	Highgate, May 22, 1869 (*R. B. S.*).	Tweeddale Coll.
f'. ♂ ♀ ad. sk.	Sweden (*H. Wheelwright*).	Tweeddale Coll.
g'. ♀ ad. sk.	Ursern, Switzerland, Aug. 13, 1869.	Tweeddale Coll.
h', i'. ♂ ♀ imm. sk.	Asia Minor, Sept. 9, 1866 (*T. Robson*).	Tweeddale Coll.

β. L. japonica.

k'. ♂ ad. sk.	Yezo, Japan (*C. McVean*).	Tweeddale Coll.
l'. ♂ imm. sk.	Hakodadi (*H. Whitely*).	Tweeddale Coll.

β'. L. albiventris.

m'. ♂ ad. sk.	Peking, August 1868 (*R. Swinhoe*).	Tweeddale Coll.

γ. L. pytiopsittacus.

n'. ♂; *o', p'*. ♀ ad. sk.	Sweden (*H. Wheelwright*).	Tweeddale Coll.
q'. ♂ imm. sk.	Sweden.	Tweeddale Coll.

δ. L. himalayana.

r'. ♂ imm. sk.	Interior of Sikhim, March 1873 (*L. Mandelli*).	Tweeddale Coll.

ε. L. americana.

s', t', u'. ♂ ad. sk.	Canada (*Bush*).	Tweeddale Coll.
v', w'. ♂ ♀ ad. sk.	California.	Tweeddale Coll.

Add:— Page 442. **Loxia bifasciata.**

f. ♂ ad. sk.	East Siberia.	Tweeddale Coll.

Add:— Page 443. **Loxia leucoptera.**

v. ♂; *w, x*. ♀ imm. sk.	N. America.	Tweeddale Coll.
y. ♂ ad. sk.	Virginia (*Hurst*).	Tweeddale Coll.
z. ♂ ad. sk.	Albany, New York.	Tweeddale Coll.

Add:— Page 446. **Pyrrhula pyrrhula.**

s. ♀ ad. sk.	Krasnoyarsk, Jan. 3, 1882 (*H. Seebohm*).	Tweeddale Coll.
t. ♀ ad. sk.	Krasnoyarsk, March 15, 1882 (*H. S.*).	Tweeddale Coll.
u. ♂ ad. sk.	Krasnoyarsk, Oct. 22, 1882 (*H. S.*).	Tweeddale Coll.

Add:— Page 447. **Pyrrhula europæa.**

p'. ♂ ad. sk.	Whitehill, Midlothian, Nov. 11, 1871 (*R. G. W. R.*).	Tweeddale Coll.
q'. ♀ ad. sk.	Whitehill, Jan. 1, 1870 (*R. G. W. R.*).	Tweeddale Coll.

Add:— Page 449. **Pyrrhula griseiventris.**

d. ♀ ad. sk.	Hakodadi (*T. Blakiston*).	Tweeddale Coll.

Add:— Page 450. **Pyrrhula kurilensis.**

c. ♂ ad. sk.	Urup Island (*Wosnessensky*).	Imp. Museum, S. Petersburg [E.].

Add:— Page 451. **Pyrrhula rosacea.**

i, *k*. ♂; *l*. ♀ ad. sk.	Yezo, Japan (*C. McVean*).	Tweeddale Coll.
m. ♂ ad. sk.	Hakodadi, Feb. 26 (*H. Whitely*).	Tweeddale Coll.
n. ♀ ad. sk.	Hakodadi, March (*H. W.*).	Tweeddale Coll.
o. ♀ ad. sk.	Hakodadi (*T. Blakiston*).	Tweeddale Coll.
p. ♂ ad. sk.	Island of Askold (*A. Dörries*).	Tweeddale Coll.

Add:— Page 453. **Pyrrhula nipalensis.**

r', *s'*. ♂ ♀ ad. sk.	Simla (*J. Biddulph*).	Tweeddale Coll.
t'. ♂ ad. sk.	Darjiling.	Tweeddale Coll.

Add:— Page 455. **Pyrrhula aurantiaca.**

n. ♂ ad. sk.	Cashmere, May 19, 1876 (*J. Biddulph*).	Tweeddale Coll.
o, *p*. ♂ ♀ ad. sk.	Gilgit, June 1876 (*J. Biddulph*).	Tweeddale Coll.

Add:— Page 457. **Pyrrhula erythrocephala.**

σ, *τ*. ♂ ♀ ad. sk.	Simla, March 1867 (*Dr. Scott*).	Tweeddale Coll.
υ, *φ*. ♂; *χ*, *ψ*. ♀ ad. sk.	Simla (*J. Biddulph*).	Tweeddale Coll.

Add:— Page 459. **Pinicola enucleator.**

f'. Ad. sk.	Canada (*Bush*).	Tweeddale Coll.
g'. Ad. sk.	Albany, New York (*J. A. Hurst*).	Tweeddale Coll.

Page 462. Add:—

2. Pinicola kodiaca.

Pinicola enucleator kodiaca, *Ridgw. Man. N. Amer. B.* p. 388 (1887).

Smaller, with proportionally much larger bill and shorter tail. Length about 8·00–8·50, &c. (*Ridgway*).

Hab. Kodiak to Sitka, Alaska (also probably southward to higher Sierra Nevada of California). It may possibly be the same as *P. flammula* of Von Homeyer (*Ridgway*, *l. c.*).

Add:— Page 464. **Uragus sibiricus.**

d, e. ♂ ♀ ad. sk.	Siberia.	Tweeddale Coll.
f. ♂ uv. sk.	Krasnoyarsk, Dec. 7, 1880 (*H. Seebohm*).	Tweeddale Coll.
g. ♂ imm. sk.	Kobdo, Mongolia, Nov. 1876 (*Potanin*).	Imp. Museum, S. Petersburg [E.].

Add:— Page 466. **Uragus sanguinolentus.**

h. ♂ ad. sk.	Yezo, Japan (*J. Blakiston*).	Tweeddale Coll.
i. ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Tweeddale Coll.
k. ♂ ad. sk.	Hakodadi, Japan, April 22, 1871.	Tweeddale Coll.
l, m. ♂ ♀ ad. sk.	Sidemi, Ussuri Land, May 1869.	Imp. Museum, S. Petersburg [E.].
n. ♂ ad. sk.	Sachalin Island (*Poljakoff*).	Imp. Museum, S. Petersburg [E.].

Add:— Page 473. **Pyrrhulorhyncha palustris.**

g. ♀ ad. sk.	Asia Minor, April 12 (*T. Robson*).	Tweeddale Coll.

Add:— Page 475. **Pyrrhulorhyncha pyrrhuloides.**

g. ♂ ad. sk.	Saisan, Nov. (*Tancré*).	Tweeddale Coll.
h. ♂ ad. sk.	R. Ural, July (*Karelin*).	Imp. Museum, S. Petersburg [E.].
i. ♂ ad. sk.	Kara-Ussu, Mongolia (*Potanin*).	Imp. Museum, St. Petersburg [E.].

Add:— Page 480. **Emberiza schœniclus.**

π. ♀ ad. sk.	Cookham, Berks, Nov. 11, 1868 (*R. B. S.*).	Tweeddale Coll.
ρ. ♀ ad. sk.	Morocco.	Tweeddale Coll.
σ. ♂ ad. sk.	Yen-e-say Valley, Siberia, June 20, 1877 (*H. Seebohm*).	Tweeddale Coll.
τ. ♀ juv. sk.	Kashgar, Dec. 1873 (*J. Biddulph*).	Tweeddale Coll.
υ. ♂ juv. sk.	Yarkand, Nov. 12 (*J. B.*).	Tweeddale Coll.
φ, χ. ♀ ad. sk.	Oi Tograh, Nov. (*J. B.*).	Tweeddale Coll.
ψ. ♂ ad sk.	Maralbashi, Jan. 1879 (*J. B.*).	Tweeddale Coll.

Add:— Page 485. **Emberiza passerina.**

b. ♂ ad. sk.	S. side of Lake Baikal, April 18 (*Dr. Dybowski*).	Tweeddale Coll.
c, d. ♂ imm. sk.	Kobdo, Mongolia, Nov. (*Potanin*).	Imp. Museum, S. Petersburg [E.].

Add :— **Page 487. Emberiza pusilla.**

a. ♂ ad. sk.	Archangel, N. Russia, July 7, 1872 (*Piottuch*).	Tweeddale Coll.
b, c. ♂ ad. et juv. sk.	Lake Baikal (*Dr. Dybowski*).	Tweeddale Coll.
d. ♂ ad. sk.	Yenesay Valley, Siberia, June 19, 1877 (*H. Seebohm*).	Tweeddale Coll.
e, f. ♂ ad. sk.	Lhota Naga Hills, Feb. & March (*A. W. Chennell*).	Tweeddale Coll.
g. ♀ ad. sk.	Lhota Naga Hills, March 1876 (*A. W. Chennell*).	Tweeddale Coll.
h. ♂ ad. sk.	Karen-nee (*R. G. W. R.*).	Tweeddale Coll.
i, k. ♂ ad. sk.	Karen-nee, March 19, 1874 (*R. G. W. R.*).	Tweeddale Coll.
l. ♂ ad. sk.	Karen-nee, April 1, 1874 (*R. G. W. R.*).	Tweeddale Coll.
m. ♀ ad. sk.	S. Andamans, March 28, 1873 (*R. G. W. R.*).	Tweeddale Coll.
n. Juv. sk.	Canton.	

Add :— **Page 490. Emberiza rustica.**

q, r. ♂ ♀ ad. sk.	Siberia (*Dybowski*).	Tweeddale Coll.
s, t. ♂ ♀ ad. sk.	Lake Baikal, Siberia (*Dybowski*).	Tweeddale Coll.
u. ♀ ad. sk.	Yezo (*C. McVean*).	Tweeddale Coll.
v, w. ♂ imm. sk.	Kobe, Japan, Jan. 27, 1870 (*R. Bergman*).	Tweeddale Coll.
x. ♀ ad. sk.	Chinkiang Province, March 8, 1875 (*Shanghai Museum*).	Tweeddale Coll.

Add :— **Page 493. Emberiza fucata.**

μ. ♂ ad. sk.	Hakodadi, April 26.	Tweeddale Coll.
ν, ξ. ♂ ad. sk.	Hakodadi, May 9, 1865 (*H. Whitely*).	Tweeddale Coll.
o. Imm. sk.	Canton, China.	Tweeddale Coll.
π. ♂ ad. sk.	Sidemi, Ussuri-Land, May 19, 1884.	Imp. Museum, S. Petersburg [E.].

Add :— **Page 497. Emberiza elegans.**

ι. ♂ ad. sk.	Island of Askold, April 15, 1879 (*C. Doerries*).	Tweeddale Coll.

Add :— **Page 498. Emberiza chrysophrys.**

a. ♂ ad. sk.	Kodyak, Dec. (*Wosnessensky*).	Tweeddale Coll.

Add :— **Page 499. Emberiza flaviventris.**

t, u. ♂ ♀ ad.; *v.* ♀ imm. sk.	Rairo, Bogos Land, August 13, 1868 (*W. Jesse*).	Tweeddale Coll.
w. ♀ ad. sk.	Rairo, Bogos Land, August 14, 1868 (*W. Jesse*).	Tweeddale Coll.

Page 503. Emberiza cabanisi.

For "Ichgasi," *read* "Tingasi."

Page 503. Emberiza melanocephala.

Add:—

π. ♂ ad. sk.	Banias, Palestine, May 6, 1864 (*H. B. Tristram*).	Tweeddale Coll.
ρ. ♀ ad. sk.	Wadale (*S. B. Fairbank*).	Tweeddale Coll.

Page 506. Emberiza luteola.

Add:—

τ'. ♂ ad. sk.	Turkestan (*Severtzoff*).	Tweeddale Coll.
υ'. ♂ ad. sk.	Kizzil, Yarkand, May 19, 1874 (*J. Biddulph*).	Tweeddale Coll.
ϕ', χ'. ♂ ad. sk.	Byan Kheyl, Afghanistan, May, 1878 (*R. G. W. R.*).	Tweeddale Coll.
ψ'. ♀ ad. sk.	Byan Kheyl, June 4, 1879 (*R. G. W. R.*).	Tweeddale Coll.
ω', *a*. ♀ ad. sk.	Zubberdust Killar, Afghanistan, June 1879 (*R. G. W. R.*).	Tweeddale Coll.
b. ♂ juv. sk.	Umballa, Nov. 1866 (*R. C. Beavan*).	Tweeddale Coll.
c. ♂ imm. sk.	Ahmednuggur, Dec. 15, 1875 (*S. B. Fairbank*).	Tweeddale Coll.

Page 509. Emberiza aureola.

Add:—

z', *a*. ♂ ♀ ad. sk.	Archangel, July 12, 1872 (*J. A. Harvie Brown*).	Tweeddale Coll.
β. ♂ ad. sk.	Krasnoyarsk, May 31, 1881 (*H. Seebohm*).	Tweeddale Coll.
γ. ♂ ad. sk.	Peking, June 1868 (*R. Swinhoe*).	Tweeddale Coll.
δ. ♂ ad. sk.	Canton.	Tweeddale Coll.
ϵ. ♀ ad. sk.	Amoy, Oct. 18, 1857 (*R. Swinhoe*).	Tweeddale Coll.
ζ, η. ♂ ad. sk.	Tippera.	Tweeddale Coll.
θ, ι, κ. ♂ imm. sk.	Tonghoo, Nov. (*R. G. W. R.*).	Tweeddale Coll.
λ, μ. ♀ imm. sk.	Tonghoo, Feb. 27 (*R. G. W. R.*).	Tweeddale Coll.
ν. ♀ ad. sk.	Tonghoo, April 17 (*R. G. W. R.*).	Tweeddale Coll.
ξ. ♂ ad. sk.	Sittang Valley, Feb. 29 (*R. G. W. R.*).	Tweeddale Coll.
o. ♂ ad. sk.	Sittang Valley, Dec. 29 (*R. G. W. R.*).	Tweeddale Coll.

Page 514. Emberiza rutila.

Add:—

z. ♂ ad. sk.	Lake Baikal (*Dr. Dybowski*).	Tweeddale Coll.
a'. ♂ juv. sk.	Chekiang Province, China (*Shanghai Mus.*).	Tweeddale Coll.
b'. ♂ ad. sk.	Karen-nee, March 19, 1874 (*R. G. W. R.*).	Tweeddale Coll.
c'. ♀ ad. sk.	Karen Hills, April 4, 1874 (*R. G. W. R.*).	Tweeddale Coll.
d'. ♀ ad. sk.	Karen Hills, Feb. 16, 1874 (*R. G. W. R.*).	Tweeddale Coll.
e'. ♂ ad. sk.	Tonghoo, April 7, 1874 (*R. G. W. R.*).	Tweeddale Coll.
f', *g'*. ♂ ♀ imm. sk.	Isankoo Hills, April 4, 1874 (*R. G. W. R.*).	Tweeddale Coll.

Add:— **Page 515. Emberiza citrinella.**

ϵ', ζ', η'. ♂ ad. sk.	Whitehill, Midlothian, N.B., March (*R. G. W. R.*).	Tweeddale Coll.
θ' ♂ ad. sk.	Cookham, Berks, Nov. 10, 1868 (*R. B. S.*).	Tweeddale Coll.
ι'. ♂ ad. sk.	Turkey, Oct. 6, 1865 (*T. Robson*).	Tweeddale Coll.

Add:— **Page 519. Emberiza sulphurata.**

k. ♀ ad. sk.	Yezo (*C. McVean*).	Tweeddale Coll.
l, *m*, *n*, ♂ ad. sk.	Amoy, April 1861 (*R. Swinhoe*).	Tweeddale Coll.
o, *p*. Imm. sk.	Fungshan, Formosa, Jan. 1866 (*R. Swinhoe*).	Tweeddale Coll.

Add:— **Page 521. Emberiza personata.**

s. Ad. sk.	Nagasaki.	Tweeddale Coll.
t. ♀ ad. sk.	S. Yezo, Oct. (*T. W. Blakiston*).	Tweeddale Coll.
u. ♂ ; *v*, *w*, *x*. ♀ ad. sk.	Yezo (*McVean*).	Tweeddale Coll.
y, *z*. ♂ ad. sk.	Hakodadi, May 1865 (*H. Whitely*).	Tweeddale Coll.
a'. ♂ juv. sk.	Hakodadi, Oct. 21, 1864 (*H. Whitely*).	Tweeddale Coll.
b'. Ad. sk.	China (*Tuckett*).	Tweeddale Coll.

Add:— **Page 522. Emberiza spodocephala.**

κ. [♂] ad. sk.	Upper Assam, February.	Tweeddale Coll.
λ. ♂ ad. sk.	Shanghai, March 8, 1875.	Tweeddale Coll.
μ. ♂ imm. sk.	Sli-he, Nov. 1873 (*R. Swinhoe*).	Tweeddale Coll.
ν. [♂] ad. sk.	Amoy, Dec. 1861 (*R. Swinhoe*).	Tweeddale Coll.
ξ. ♀ ad. sk.	Amoy, March 1861 (*R. Swinhoe*).	Tweeddale Coll.
o. Ad. sk.	Amoy, Feb. 1867 (*R. Swinhoe*).	Tweeddale Coll.
π. ♀ ad. sk.	Chekiang Province, March 1861.	Tweeddale Coll.
ρ. ♂ ad. sk.	Canton.	Tweeddale Coll.

Add:— **Page 525. Emberiza cirlus.**

l'. ♂ ad. sk.	Hampstead, Nov. 12, 1868 (*R. B. S.*).	Tweeddale Coll.
m', *n'*. Ad. sk.	Morocco (*Olcese*).	Tweeddale Coll.
o'. ♀ ad. sk.	Macedonia.	Tweeddale Coll.
p'. ♂ ad. sk.	Ortakeuy, Turkey, April 12, 1867 (*T. Robson*).	Tweeddale Coll.
q'. ♂ ad. sk.	Ortakeuy, Nov. 20, 1863 (*T. Robson*).	Tweeddale Coll.
r', *s'*. ♂ ad. sk.	Asia Minor, Nov. (*T. Robson*).	Tweeddale Coll.

Add:— **Page 529. Emberiza cinerea.**

e. ♂ ad. sk.	Smyrna, April 15, 1864 (*Dr. Krüper*).	Tweeddale Coll.

Add :— Page 530. **Emberiza hortulana.**

m'. Imm. sk.	Morocco (*Olcese*).	Tweeddale Coll.
n', *o'*. ♂ ad. sk.	Ortakeuy, Turkey, April (*T. Robson*).	Tweeddale Coll.
p'. ♂ ad. sk.	Guiksu, Asia Minor, April 26, 1867 (*T. Robson*).	Tweeddale Coll.
q'. ♀ ad. sk.	Becos, Asia Minor, June 10, 1868 (*T. Robson*).	Tweeddale Coll.
r'. ♂ ad. sk.	Asia Minor, April 26, 1866 (*T. Robson*).	Tweeddale Coll.
s', *t'*. ♂ ♀ ad. sk.	Asia Minor, May 1865 (*T. Robson*).	Tweeddale Coll.
u'. ♂ ad. sk.	Wady Beerha, under Mt. Tabor, April 1864 (*H. B. Tristram*).	Tweeddale Coll.

Add :— Page 533. **Emberiza buchanani.**

α'. Ad. sk.	Kokand (*Dr. Severtzoff*).	Tweeddale Coll.
β'. ♀ ad. sk.	Umballa, April 1867 (*Dr. Scott*).	Tweeddale Coll.
γ'. ♂ ad. sk.	Khandala, April 12, 1876 (*S. B. Fairbank*).	Tweeddale Coll.
δ'. ♂ ad. sk.	Ahmednugger, Dec. 19, 1874 (*S. B. Fairbank*).	Tweeddale Coll.
ε'. ♂ imm. sk.	E. of Nagar, Dec. 11, 1874 (*S. B. Fairbank*).	Tweeddale Coll.

Add :— Page 535. **Emberiza cæsia.**

l, *m*. ♂ ♀ ad. sk.	Mt. Carmel, March 1864 (*H. B. Tristram*).	Tweeddale Coll.

Add :— Page 537. **Emberiza cia.**

y. ♂ ad. sk.	Europe (*Fraser*).	Tweeddale Coll.
z. [♂] ad. sk.	Genoa, July 1868.	Tweeddale Coll.
a'. ♀ ad. sk.	Algeria (*Verreaux*).	Tweeddale Coll.
b'. ♂ ad. sk.	Orkateuy, Europe, Nov. 3, 1865 (*T. Robson*).	Tweeddale Coll.

Add :— Page 539. **Emberiza stracheyi.**

σ'. ♀ ad. sk.	L. Yurru, July 5, 1874 (*J. Biddulph*).	Tweeddale Coll.
τ'. ♂ ad. sk.	Karbu, July 7, 1874 (*J. Biddulph*).	Tweeddale Coll.
υ. ♀ ad. sk.	Sonamarg, July 14, 1874 (*J. Biddulph*).	Tweeddale Coll.
φ. ♂; *χ*, *ψ*. ♀ ad. sk.	Kotul, Afghanistan, June 19, 1874 (*R. G. W. R.*).	Tweeddale Coll.
ω. ad. sk.	Attock, Punjab, Feb. 1879 (*R. G. W. R.*).	Tweeddale Coll.
a. ♀ ad. sk.	Lawrencepur, Punjab, March 7, 1879 (*R. G. W. R.*).	Tweeddale Coll.
b. Ad. sk.	Simla, March 1867 (*Dr. Scott*).	Tweeddale Coll.
c. ♂ ad. sk.	Simla, June 1866 (*R. C. Beavan*).	Tweeddale Coll.
d. ♂ ad. sk.	Simla, July 1866 (*R. C. Beavan*).	Tweeddale Coll.
e, *f*. ♂ ad. et ♂ imm. sk.	Fagoo, near Simla, August 1866 (*R. C. Beavan*).	Tweeddale Coll.
g. ♀ ad. sk.	Umballa, Feb. 1867 (*Dr. Scott*).	Tweeddale Coll.

Add :— **Page 542. Emberiza cioides.**

h. ♂ ad. sk.	Krasnoyarsk, Oct. 6, 1878 (*Kibort*).	Tweeddale Coll.
i. ♂ ad. sk.	Krasnoyarsk, Nov. 22, 1880 (*Kibort*).	Tweeddale Coll.
k. ♂ ad. sk.	Onon River, E. Siberia (*Dr. Dybowski*).	Tweeddale Coll.
l. Ad. sk.	Mongolia, Oct. 1 (*Potanin*).	Imp. Museum, S. Petersburg [E.].
m. ♂ ad. sk.	Kobdo, Mongolia, winter of 1877 (*Potanin*).	Imp. Museum, S. Petersburg [E.].

Add :— **Page 544. Emberiza castaneiceps.**

h, *i.* ♂ ; *k.* ♀ ad. sk.	China (*Tuckett*).	Tweeddale Coll.
l. ♂ ad. sk.	Shanghai, March 9, 1875.	Tweeddale Coll.
m. ♀ imm. sk.	Amoy, Nov. 1866 (*R. Swinhoe*).	Tweeddale Coll.
n. ♂ ad. sk.	Amoy, April 1861 (*R. Swinhoe*).	Tweeddale Coll.
o. ♂ ad. sk.	Ningpo, March 1872 (*R. Swinhoe*).	Tweeddale Coll.

Add :— **Page 544. Emberiza ciopsis.**

t. ♂ ad. sk.	Japan (*R. Bergman*).	Tweeddale Coll.
u. ♂ ad. sk.	Hakodadi, April 16, 1865 (*H. Whitely*).	Tweeddale Coll.
v, *w*, *x.* ♂ ; *y.* ♀ ad. sk.	Yezo, Japan (*C. McVean*).	Tweeddale Coll.

Add :— **Page 545. Emberiza tristrami.**

b. ♂ ad. sk.	Tientsin, China (*Fleming*).	Tweeddale Coll.

Add :— **Page 547. Emberiza stewarti.**

y'. ♂ ad. sk.	Turkestan, May (*Dr. Severtzoff*).	Tweeddale Coll.
z'. ♀ ad. sk.	Kokand (*Dr. Severtzoff*).	Tweeddale Coll.
α, *β.* ♂ ad. sk.	Byan Kheyl, April 1879 (*R. G. W. R.*).	Tweeddale Coll.
γ, *δ.* ♂ ; *ε*, *ζ.* ♀ ad. sk.	Byan Kheyl, May 1879 (*R. G. W. R.*).	Tweeddale Coll.
η. ♂ ad. sk.	Kashmir, June 1867 (*Dr. Jerdon*).	Tweeddale Coll.
θ. ♂ ad. sk.	Baramulla, July 31 (*Dr. Jerdon*).	Tweeddale Coll.
ι. ♂ ad. sk.	Chergaon, N.W. Himalayas.	Tweeddale Coll.
κ. ♂ imm. sk.	Simla, 1865 (*Capt. Stackhouse Pinwill*).	Tweeddale Coll.
λ, *μ*, *ν.* ♂ ; *ξ.* ad. sk.	Umballa, Feb. 1867 (*Dr. Scott*).	Tweeddale Coll.
o, *π.* ♂ ad. et juv. sk.	Umballa, April 1867 (*Dr. Scott*).	Tweeddale Coll.

Add :— **Page 549. Emberiza leucocephala.**

a'. ♂ ad. sk.	Ortakeuy Hills, Turkey, Oct. 31, 1865 (*T. Robson*).	Tweeddale Coll.
b'. ♂ ad. sk.	Siberia (*Dr. Dybowski*).	Tweeddale Coll.

c'. ♂ ad. sk.	Siberia.	Tweeddale Coll.
d', *e'*. ♂ ♀ ad. sk.	Lake Baikal (*Dr. Dybowski*).	Tweeddale Coll.
f'. ♂ ad. sk.	Turkestan, Nov. 16, 1886 (*Dr. Severtzoff*).	Tweeddale Coll.

Add :— Page 552. **Miliaria miliaria.**

β, *γ*. ♂ ♀ ad. sk.	Asia Minor, April (*T. Robson*).	Tweeddale Coll.

Add :— Page 559. **Fringillaria septemstriata.**

k. ♂ ad. sk.	Ain, Bogos Land, July 6, 1868 (*W. Jesse*).	Tweeddale Coll.
l. ♀ ad. sk.	Ain, Aug. 16, 1868 (*W. Jesse*).	Tweeddale Coll.

Add :— Page 561. **Fringillaria striolata.**

a. Imm. sk.	Salt Range, Nov. 1867 (*Dr. C. Jerdon*).	Tweeddale Coll.

Add :— Page 566. **Fringillaria variabilis.**

l. Ad. sk.	Japan.	Tweeddale Coll.
m. Ad. sk.	Yezo, Japan.	Tweeddale Coll.

Add :— Page 568. **Melophus melanicterus.**

i. ♂ ad. sk.	Simla, March 1869 (*R. C. Beavan*).	Tweeddale Coll.
k, *l*. ♂ ♀ sk.	Simla, July 1866 (*Dr. Scott*).	Tweeddale Coll.
m. ♂ ad. sk.	Karen-nee, March 1874 (*R. G. W. R.*).	Tweeddale Coll.
n, *o*. ♂ ♀ imm. sk.	Karen-nee, March 1874 (*R. G. W. R.*).	Tweeddale Coll.
p. ♂ ad. sk.	Karen Hills, April 4, 1875 (*R. G. W. R.*).	Tweeddale Coll.
q. ♂; *r*, *s*. ♀ ad. sk.	Tonghoo, March 1875 (*R. G. W. R.*).	Tweeddale Coll.
t, *u*, *v*. ♂ ad. sk.	China, Canton.	Tweeddale Coll.
w. ♂ ad. sk.	Fungsh-an, June 1876.	Tweeddale Coll.
x. ♂ imm. sk.	Foochow, June 1876.	Tweeddale Coll.
y. ♂ imm. sk.	Amoy, Feb. 1861 (*R. Swinhoe*).	Tweeddale Coll.
z. ♀ ad. sk.	Amoy, April 1861 (*R. Swinhoe*).	Tweeddale Coll.
a'. ♂ ad. sk.	Hongkong, Feb. 1860 (*R. Swinhoe*).	Tweeddale Coll.

Add :— Page 572. **Plectrophenax nivalis.**

α'. ♀ ad. sk.	Taplow, Nov. 19, 1869 (*R. B. S.*).	Tweeddale Coll.
β'. Ad. sk.	Russia, 1869.	Tweeddale Coll.
γ', *δ'*. ♂ ♀ ad. sk.	Yen-e-say, Siberia, May 16, 1877 (*H. Seebohm*).	Tweeddale Coll.
ε'. ♂ ad. sk.	Krasnoyarsk, Jan. 26, 1880 (*H. Seebohm*).	Tweeddale Coll.
ζ', *η'*. Ad. sk.	W. Canada (*Hamilton*).	Tweeddale Coll.
θ. ♂ ad. sk.	Canada (*Col. C. E. Shelley*).	Tweeddale Coll.
ι'. Ad. sk.	Washington (*J. R. Hurst*).	Tweeddale Coll.

Page 577. Add :—

1*a*. Plectrophenax townsendi.

Plectrophenax nivalis townsendi, *Ridgw. Man. N. Amer. B.* p. 403 (1887).

Larger, with much larger and longer bill, &c. (*Ridgway*).

Hab. Prybilof Islands, Alaska, and Commander Islands, Kamtschatka (*Ridgway*).

Add :— Page 579. **Calcarius lapponicus.**

v. ♂ ad. sk.	Yen-e-say, July 1877 (*H. Seebohm*).	Tweeddale Coll.
ξ. ♂ ad. sk.	Labrador.	Tweeddale Coll.
o. ♀ ad. sk.	S. Michael's, Alaska (*L. M. Turner*; Sm. no. 70201).	Salvin-Godman Coll.

Add :— Page 598. **Zonotrichia albicollis.**

v. Ad. sk.	Albany, New York (*J. A. Hurst*).	Tweeddale Coll.

Add :— Page 625. **Cyanospiza pulchra.**

Passerina versicolor pulchra, *Ridgw. Man. N. Amer. B.* i. p. 448 (1887).

Passerina pulchra is described by Mr. Ridgway as being "rather smaller than *P. versicolor*, or with shorter wing and tail, &c."

Hab. Lower California and Western Mexico (vicinity of Mazatlan).

Add :— Page 647. **Junco hiemalis.**

y. ♂ ad. sk.	Albany, New York (*J. A. Hurst*).	Tweeddale Coll.

Add :— Page 651. 3*a*. **Junco shufeldti.**

Junco hyemalis shufeldti, *Coale, Auk*, iv. p. 330 (1887).

This form of *Junco oregonus* has been described by Mr. H. K. Coale from New Mexico.

Add :— Page 674. **Passerculus sandwichensis.**

β. Ad. sk.	Mugeres Island, Dec. 1885 (*G. F. Gaumer*).	Salvin-Godman Coll.

Add :— Page 687. **Ammodromus savannarum.**

h'. Ad. sk.	Cozumel Island (*G. F. Gaumer*).	Salvin-Godman Coll.

Add :— Page 691. **Ammodromus manimbe.**

f'. ♀ ad. sk.	Para, Dec. 30, 1872 (*E. L. Layard*).	Tweeddale Coll.

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* *Crithagra* on Plates.

W. Hart del et lith

Coccothraustes humii.

Mintern Bros. imp.

W Hart del et lith.

Spermophila palustris.

Mintern Bros. imp.

W Hart del et lith.

Chrysomitris thibetana.

Mintern Bros. imp.

W. Hart. del. et lith.

Mentifringilla blanfordi.

Hanhart's Bros. imp.

Passer pyrrhonotus.

Mintern Bros. imp.

J. G. Keulemans del et lith.

Poliospiza rufibrunnea.

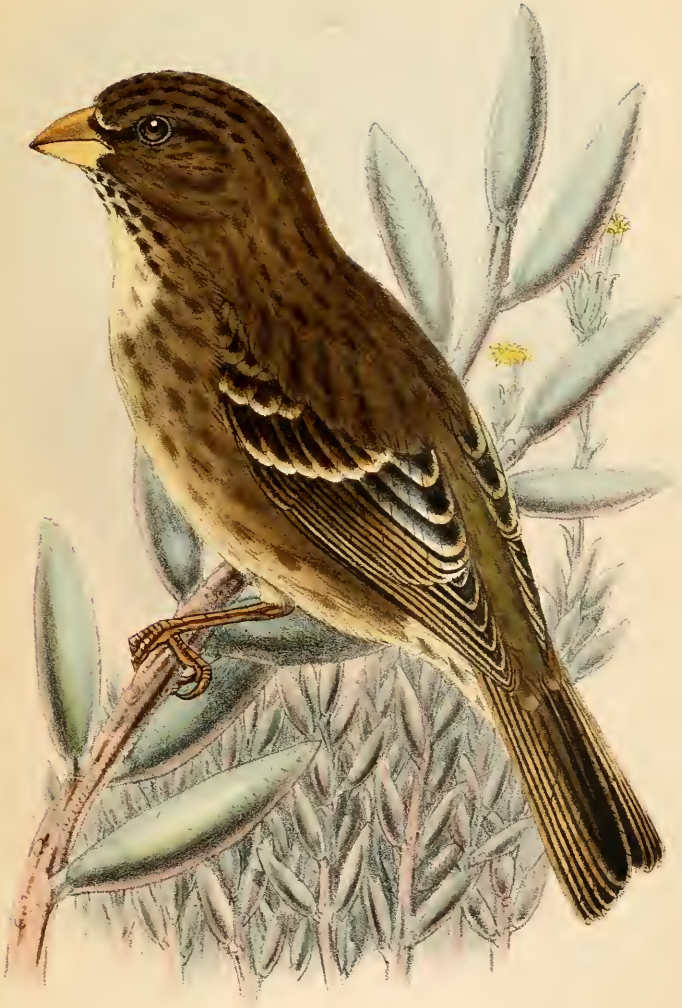
Mintern Bros. imp

J. G. Keulemans del. et lith. *Githagra burtoni.* Mintern Bros. imp.

J. G. Keulemans del et lith.

Gilhagra crocopygia

Mintern Bros. imp.



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Grithagra leucoptera.

W Hart del et lith.

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Carpodacus ambiguus.

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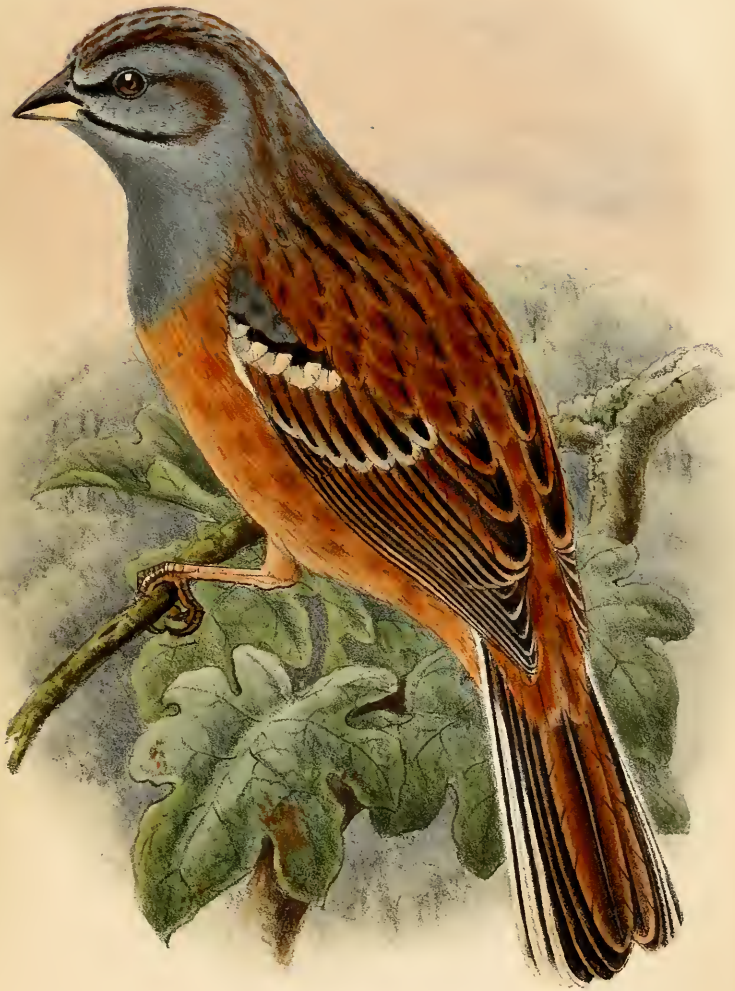
Pyrrhula kurilensis.

Mintern Bros. imp.



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Emberiza godlewskii.

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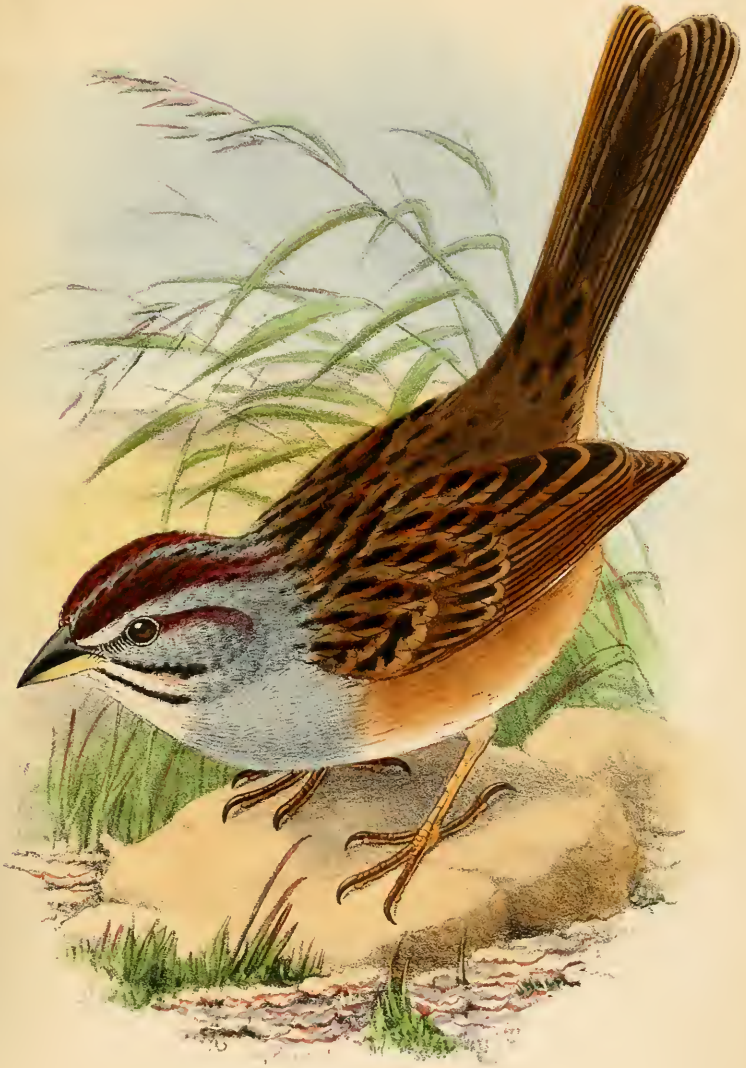

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Zonotrichia whitii .

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Prospiza boliviana.

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1. Rhodospingus cruentus. *2. Rhodospingus mentalis.*

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1. *Parvaria cucullata*.
2. *Parvaria dominicana*.
3. *Parvaria nigrigenis*.
4. *Parvaria gularis*.
5. *Parvaria capitata*.
6. *Parvaria cervicalis*.